

Naval Education and  
Training Command

NAVEDTRA 131  
FEBRUARY 1993

Training Manual  
(TRAMAN)



# PERSONNEL PERFORMANCE PROFILE BASED CURRICULUM DEVELOPMENT MANUAL

## VOLUME III MANAGERS GUIDE



19950406 024

### SUPPLEMENT TO MIL-STD-1379D

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

Nonfederal government personnel wanting a copy of this document  
must use the purchasing instructions on the inside cover.



0502LP4774800

NAVSUP 2002 gives the quantity restriction for this publication.

For authorization to exceed quantity restrictions on this item ordered from ASO, send DD FORM 1348 with a letter, stating the justification for excess copies to Naval Education and Training Program Management Support Activity (NETPMSA), Code 071, Pensacola, FL 32509-5000.

Letters of requests should be forwarded on command letterhead, signed by the Commanding Officer, OINC or by direction. Message requests to exceed quantity restrictions must be in proper MILSTRIP requisition format.

**DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.**

Nonfederal government personnel wanting a copy of this document must write to Superintendent Of Documents, Government Printing Office, Washington, DC 20402 OR Commanding Officer, Naval Publications and Forms Directorate, Navy Aviation Supply Office, 5801 Tabor Avenue, Philadelphia, PA 19120-5099, Attention: Cash Sales, for price and availability.



DEPARTMENT OF THE NAVY  
CHIEF OF NAVAL EDUCATION AND TRAINING  
NAVAL AIR STATION  
PENSACOLA, FLORIDA 32508-5100

1500  
Ser N-63/0076  
9 Mar 93

LETTER OF PROMULGATION FOR NAVEDTRA 131

1. This manual will be implemented throughout the Naval Education and Training Command upon receipt. It replaces DOD-HDBK 292 as a guide for Personnel Performance Profile (PPP) based curriculum development within the NAVEDTRACOM. This manual also supersedes and cancels NAVEDTRA 38004A.
2. This publication provides guidance for developing training materials which will comply with the requirements of MIL-STD 1379D, recognized by CNET as the single standard for production of training materials.
3. The procedures presented in this manual follow a PPP Based Curriculum Development method. The manual is designed for use by Navy subject matter experts who hold Instructor NEC 9502 or equivalent and are graduates of the PPP Based Curriculum Developer course (CIN A-012-0051), which used this manual as its basic reference.
4. Guidelines for planning a curriculum development project and for producing training materials through five stages of the PPP based method are contained in this manual. Guidelines for the implementation and evaluation of curriculum training materials are contained in NAVEDTRA 135, Navy School Management Manual, promulgated 18 September 1992.
5. Procedural guidance for development of training materials following a task based method is published in NAVEDTRA 130.
6. Corrections and comments concerning this manual are invited and should be addressed to Chief of Naval Education and Training (N-63).
7. Reviewed and approved.

*Louise C. Wilmot*  
LOUISE C. WILMOT  
VICE CNET

Subj: LETTER OF PROMULGATION FOR NAVEDTRA 131

Distribution (CNETINST 5218.1F, Case A):

Lists I, II (1, 2, 5), III (7), IV (1, 2, 4-6), V (2-6, 10-17, 21, 24-44, 46), VI, VII, XII (10, 11, 50)

Copy to:

CNO (N7, 86, 87, 88)

COMNAVSEASYS COM (Code 04MP) (2 copies)

COMNAVAIRSYS COM (PMA 205-41)

COMSPAWARSYS COM (Code 003-244)

COMNAVAIRESFOR (Code 553)

COMNAVSURFRESFOR (Code 33CRL) (2 copies)

HSETC (Code 05)

DIRSSP (SP-15311)

NAVPERSRANDCEN (Code 152)

NETSAFA

NAVSAFECEN (Code 48)

CESO (Code 152) (5 copies)

AFLOATTRAGRU San Diego (2 copies)

AFLOATTRAGRU MID PAC (5 copies)

AFLOATTRAGRU West PAC (5 copies)

TACTRAGRUPAC (2 copies)

FASOTRAGRULANT (Code 20A)

FASOTRAGRUPAC (Code 30) (4 copies)

FASOTRAGRUPAC DET Moffett Field (Code 30)

NAVTRASYS SCEN (Code 12) (2 copies)

CG MCCDC (C461) (2 copies)

HQ ATC/XPCR (2 copies)

HELSUPPRON EIGHT

CDRTRADOC (ATTG-CD-7) (2 copies)

NSDDS

Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

## CHANGE RECORD

[illegible]

## **FOREWORD**

### **SCOPE**

*NAVEDTRA 131: PERSONNEL PERFORMANCE PROFILE BASED CURRICULUM DEVELOPMENT MANUAL* provides guidance for developing curricula to teach operation and maintenance of Hardware and/or performance of tasks or functions (NOTE: Hardware is any System/Subsystem/Equipment). The processes and illustrations found in NAVEDTRA 131 reflect the experience of subject matter experts, curriculum developers, and decision makers who approve Navy training material developed by Navy curriculum developers and civilian contractors. NAVEDTRA 131 describes and illustrates all facets of planning, analysis, design, and development of curricula. NAVEDTRA 131 provides step-by-step guidance to curriculum developers for developing job-efficient and effective training material.

Volume I of this manual—*Developers Guide*—contains *standards* and *conventions* for the development of training programs. It is designed for use by the individual actually revising or developing training materials. A “standard” is a specification or binding restriction that must be adhered to, or negotiated and approved for every exception. A “convention” offers some choice and flexibility. Waivers from any content standard and establishment of any format standard are the responsibility of the Curriculum Control Authority (CCA) for the individual course.

The Volume I Supplement contains Curriculum Developer Aids (**CDAs**) that help the developer construct the curriculum and course documentation pages

Volume II of this manual—*Sample Products*—provides samples of each of the management and curriculum documents in a format that is consistent with the format conventions discussed in Volume I

Volume III of this manual—*Managers Guide*—is designed for the individual charged with the management of a course revision or development. It describes approval points, approval authorities, and responsibilities. The

volume addresses the manager's responsibilities in each of the stages of PERSONNEL PERFORMANCE PROFILE BASED CURRICULUM DEVELOPMENT.

## **RELATIONSHIP TO MIL-STD-1379D**

Chapter titles in this manual were derived from specific MIL-STD-1379D *Data Item Descriptions (DIDs)*, and/or paragraphs thereof, which this manual supports. The name assigned to individual documents developed in accordance with this manual will correspond with the document name used herein unless an exception is granted by the CCA.

The CCA may allow the following name substitutions:

<b>MIL-STD-1379D NAME</b>	<b>OPTIONAL NAME</b>
Lesson Plan	Instructor Guide
Written Test	Knowledge Test
Resource Requirements List	Master Materials List/ Equipment Requirements List
Trainee	Student
Training Facility	Training Activity

## **CONTRACTUAL USE OF MANUAL**

NAVEDTRA 131 sample documents may also be used as *an exhibit* in a contract as service-specific guidance for use by civilian contractors developing Navy training material. Used in this context, NAVEDTRA 131 amplifies and provides formats to supplement selected DIDs in **MILITARY STANDARD: MILITARY TRAINING PROGRAMS (MIL- STD-1379D)**. For these selected DIDs in MIL-STD-1379D there is a format and procedure appropriate for training material development in accordance with MIL-STD-1379D.

Used in the context of service-specific contractual guidance, NAVEDTRA 131 has been written to support selected DIDs from MIL-STD-1379D, and selected paragraphs within each DID. Collectively, these selected DIDs and paragraphs describe the minimum product requirements for most Navy training programs. Note, however, that not all DIDs are required in all instances. Each DID must be carefully chosen, and then tailored to ensure production of the desired training material. Note, also, that MIL-STD-1379D DIDs, other than those listed on the first page of the Volume I chapter, may also be chosen if required for development of a quality training program. Additional information on selection and tailoring DIDs is found in MIL-STD-1379D.

## **IN PROCESS REVIEWS**

Whether developed inhouse or by a contractor, *In Process Reviews (IPRs)* will normally be conducted as follows to review the products. ("Bullets" indicate IPR points, followed by the products to be reviewed):

### **STAGE ONE**

- *Personnel Performance Profile (PPP)* Table Listing
- Draft new and/or modified PPP Tables
- Preliminary TPS

### **STAGE TWO**

- Preliminary TCCD

### **STAGE THREE**

- Cross sections of LP, TG/Instruction Sheets, IMM (Requirement for cross section and contents to be determined by CCA)
- Draft LP, TG/Instruction Sheets, IMM Roughs, Testing Plan, Tests

### **STAGE FOUR**

- Conduct Pilot Course



- Pilot Course Monitoring Report
- Red-lined Curriculum

**STAGE FIVE**

- Finalized TCCD, Curriculum, Letter of Promulgation

## **HOW TO USE NAVEDTRA 131, VOLUMES I, II, AND III**

NAVEDTRA 131 provides guidance and illustrations for use in the planning, analysis, design, development, implementation, and evaluation of curricula. This manual has been designed so you may read the entire chapter or go to any subject area and perform the required task.

### **VOLUME I**

Volume I contains the step-by-step guidance for developing effective training materials. Additionally, the Volume I Supplement contains Curriculum Development Aids that help the developer construct the curriculum and course documentation pages. All chapters in Volume I were written so you can follow along with the corresponding figures, diagrams, Curriculum Development Aids, or examples presented in either Volume II or the Volume I supplement. *It is important to open Volume II and/or the Volume I supplement when referenced and study the appropriate illustrations.*

### **VOLUME II**

Volume II contains examples of all the curriculum materials that make up a Course of Instruction developed under the PPP/TPS method. When you have located the sample document in Volume II that corresponds to the chapter you have selected in Volume I, keep the sample at hand as you read Volume I. For example, if you are developing a Training Path System (TPS), turn to the TPS section of the sample course in Volume II .

Volume II contains this sample course:

- An electronics course, "TRIDENT EXTERIOR COMMUNICATIONS SYSTEM"

### **VOLUME III**

Volume III contains management information important to planning, analysis, design, development, implementation, and evaluation of

curricula. The chapters in Volume III establish the requirements for the submission and review of the various products developed during the curriculum development process.

**Take a few moments and turn to the different volumes and see how they relate.**

## **TABLE OF CONTENTS**

	<u>Page</u>
Title Page	1
Change Record	3
Foreword	5
Introduction	
Chapter 1 – Training Materials Development	1-1
Planning	
Chapter 2 – Training Project Plan	2-1
Stage One	
Chapter 3 – Personnel Performance Profile Tables	3-1
Chapter 4 – Training Path System	4-1
Stage Two	
Chapter 5 – Training Course Control Document	5-1
Stage Three	
Chapter 6 – Curriculum and Support Materials	6-1
Stage Four	
Chapter 7 – Pilot Course	7-1
Addendum 7-A – Course Monitoring Outline Sheet	7-A-1
Addendum 7-B – Course Monitoring Time Log	7-B-1
Addendum 7-C – Training Facility Administrative Review Checklist	7-C-1
Stage Five	
Chapter 8 - Implement Final Curriculum	8-1
Evaluation	
Chapter 9 – Evaluation, Surveillance and Training Materials Modification	9-1

## INTRODUCTION

### CHAPTER 1

#### TRAINING MATERIALS DEVELOPMENT

#### INTRODUCTION

- The core procedures for developing training materials following the Personnel Performance Profile Based Curriculum Development method consists of five interrelated *Stages*. The five stages are preceded by planning, and followed by training materials evaluation, surveillance and modification. A curriculum development project is a complex undertaking bringing together a wide range of human and material resources for the goal of creating quality training.
  - ▶ **PLANNING** identifies resources requirement and the sequence of events in the development process
  - ▶ **STAGE ONE** consists of determining job tasks, supporting skills and knowledge, and level of performance
  - ▶ **STAGE TWO** determines the skills and knowledge which must be taught and produces the course learning objectives and an instructional sequence
  - ▶ **STAGE THREE** produces the instructional materials for the instructor and the trainee
  - ▶ **STAGE FOUR** begins when the *Curriculum Control Authority (CCA)* has approved a course for pilot, and ends with submittal of the Pilot Course Monitoring Report

- ▶ **STAGE FIVE** begins after the incorporation of the results of the pilot course ("red-line") into smooth curriculum and management materials, and ends with the Curriculum Control Authority's Letter of Promulgation which approves the material for use in support of Navy training.
- ▶ **EVALUATION** is the surveillance, evaluation, change and revision of the training materials based on assessment of the training materials and the performance of the graduates in the fleet
- NAVEDTRA 131: *Personnel Performance Profile Based Curriculum Development* is designed to guide Navy activity personnel (curriculum developers) in the development of accurate and effective training materials. This manual:
  - ▶ Specifies the tasks necessary to develop and support training materials
  - ▶ Establishes the sequence of task performance
  - ▶ Assigns task performance responsibilities
- The overall process is illustrated in Figure 1-1

**PLANNING → CCA/Functional Commander/CNET/OPNAV**

- Training Project Plan (TPP)

**STAGE ONE**

- PPP Table List
- New and Modified PPP Tables
- Training Path System (TPS)

**STAGE TWO → CCA**

- Preliminary Training Course Control Document (TCCD)

**STAGE THREE**

- Instructional Materials Cross Section (If Required)
- Instructor Guide
- Trainee Guide
- Tests
- Other Support Materials

**STAGE FOUR → CCA**

- Course Pilot
- Pilot Course Monitoring Report

**STAGE FIVE → CCA/Functional Commander**

- Final Curriculum
- Final TCCD
- Letter of Promulgation

**EVALUATION**

- Internal
- External

[ → = *Approval Authority* ]

**FIGURE 1-1: CURRICULUM DEVELOPMENT PROCESS**

## **TRAINING MATERIALS**

Training materials include **management materials**, **curriculum materials**, and **support materials**. The training materials produced by Navy inhouse developers follow the guidelines of these manuals and are compatible with the MIL-STD-1379D specifications.

Recognizing the complexity of training materials development and the external factors which influence curriculum development projects, this manual is **NOT** to be used as a prescriptive document. Waiver of any procedure or content requirement is at the discretion of the Curriculum Control Authority (CCA). The CCA may also require additional documents or reviews.

- **Management Materials** define training requirements and provide an overall plan for the accomplishment of these requirements. Management materials for development include:
  - ▶ Training Project Plan (**TPP**)
  - ▶ Personnel Performance Profile (**PPP**) Tables
  - ▶ Training Path System (**TPS**)
  - ▶ Training Course Control Document (**TCCD**)
  - ▶ Testing Plan
  - ▶ Pilot Course Monitoring Report
  - ▶ Documentation required or appropriate for audit trail



- **Curriculum Materials** include all materials required for the presentation of information and the development of skills in formal school training. Under this definition, "curriculum materials" include:
  - ▶ Lesson Plan
  - ▶ Trainee Guides (or Instruction Sheets)
  - ▶ Test Package
  - ▶ Other materials helpful in the preparation and presentation of Lesson Topics (for example, Exercise Controller Guide)
- **Support Materials** are instructional materials and other devices used in support of formal instruction, informal instruction, or for independent study. Some of the most common support materials are:
  - ▶ **Instructional Media Materials (IMM)**
    - Wall Charts
    - Films
    - Videotapes
    - Transparencies
  - ▶ Training devices
  - ▶ On-The-Job Training Handbooks
  - ▶ Textbooks
  - ▶ Technical manuals

- ▶ Other materials helpful in the preparation and presentation of Lesson Topics (for example, Fault Insertion Guide, Instructor Utilization Handbook)

Volume I provides content requirements and format conventions for management and curriculum materials. Volume II provides sample packages which meet the format conventions established in Volume I. The remaining chapters in this Volume establish requirements for the submission and review of various management and curriculum materials.

## **TRAINING MATERIALS SUPPORT**

All training materials are maintained current and accurate by surveillance and modification efforts

- **Surveillance**
  - ▶ Constant surveillance is required to detect changes in documentation, equipment, or procedures that impact training materials. Procedures for identifying training material deficiencies, for recommending changes, and for coordinating recommended changes are given in Chapter 9 of this Volume.
- **Training Material Modifications**
  - ▶ There are four types of training material modifications: *Interim Change*, *Change*, *Technical Change*, and *Revision*. Definitions and procedures for incorporating training material modifications are also described in Chapter 9 of this Volume.

## **PROGRAM PARTICIPANTS**

The following participants have vital roles in the development and support of training materials

### **Training Agency (TA)**

An office, bureau, command, or headquarters exercising command of and providing support to some major increment of the Department of the Navy's formal training effort. OPNAVINST 1500.44 identifies the TAs as:

- *Chief of Naval Education and Training (CNET)*
- *Naval Medical Command (NAVMEDCOM)*
- *Naval War College (NAVWARCOL)*
- *U.S. Naval Academy (USNA)*
- *Commander in Chief, U.S. Pacific Fleet (CINCPACFLT)*
- *Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT)*
- *Chief of Naval Reserve (CHNAVRES)*

### **Training Support Agency (TSA)**

An office, command, or headquarters responsible for providing material and other forms of support to the Training Agency (TA)

- The TSA is normally a *System Commander (SYSCOM)* responsible for providing training support to the TA for a piece of equipment, a subsystem, or a system

---

**EXAMPLES:** Initial (factory) training, curriculum development, instructional media materials, training equipment, prefaulted modules, training equipment life-cycle maintenance support, and curriculum surveillance services.

---

- TSAs are most frequently involved with contractor-developed training; however, TSAs have influence at the training activity level, especially for course surveillance functions
- Whether involved in a training development project, or in training support, a TSA is usually appointed directly or indirectly by CNO
- The TSA must liaison with the TA, or a TA-appointed Curriculum Control Authority, and Course Curriculum Model Manager to assure products or services meet training command standards and fleet requirements

### **Functional Commander**

CNET has designated Functional Commanders to plan, manage, and budget for training courses across broad functional areas. CNET's Functional Commanders are:

- *Chief of Naval Technical Training (CNTECHTRA)*
- *Commander, Training Command, U.S. Atlantic Fleet (COMTRALANT)*
- *Commander, Training Command, U.S. Pacific Fleet (COMTRAPAC)*
- *Chief of Naval Air Training (CNATRA)*

### Curriculum Control Authority (CCA)

To support CNET's functions as a Training Agency, CNET designates a Functional Commander to have curriculum control of specific courses/ training programs

- The CCA functions identified in this manual are CNET's training agency responsibilities which are delegated to the Functional Commander having curriculum control authority
- CCA approves instructional methods and materials
- A single alphabetic character is used in the first position of the *Course Identification Number (CIN)* to identify the command which has curriculum control authority. Volume I of NAVEDTRA 10500, *Catalog of Navy Training Courses (CANTRAC)* identifies the command having curriculum control for existing courses.

### Training Facility (TF)

A Navy command which has a primary mission of conducting or supporting training. A school or institution at which courses are offered. The TF maintains selected audit trail documents and annual reviews of training material and makes recommendations to the *Course Curriculum Model Manager (CCMM)* for changes or modifications, and maintains training equipment and facilities for the training courses they teach.

## **Course Curriculum Model Manager (CCMM)**

A CCMM is assigned by the CCA with the responsibility for conducting and maintaining a specific course

- The CCMM may initiate curriculum development or course revision, or incorporate changes to a course, in accordance with current directives. The CCMM conducts curriculum review and analysis of feedback, and maintains course audit trail documentation.
- Any or all of the course preparation, support, and change responsibilities may be assigned to and carried out by the CCMM
- The CCMM normally functions as the developer for Navy-developed courses

## **APPLICABLE DOCUMENTS**

The documents listed below are the primary resources to be used by activity developers in the design and development of training materials. Use of documents and manuals in effect when you start development of training materials is assumed. Later issues of these specifications, standards, documents, and publications, or new specifications, standards, documents, and publications, may be used subject to joint agreement of the CCA and activity curriculum developers. Many acronyms and abbreviations used in these chapters are common throughout the Navy. Other acronyms used are unique to training; they are defined in CNETINST 1500.12, *Glossary of Navy Education and Training Terminology*.

- **STANDARDS, GENERAL**

MIL-STD-1379D *Military Standard: Military Training Programs*

MIL-STD-1388-2 *Military Standard: DOD Requirements for a Logistic Support Analysis Record (LSAR)*

- **PUBLICATIONS**

**Chief of Naval Operations**

OPNAVINST 1500.8 *Navy Training Plan Process*

OPNAVINST 1500.19 *Authority and Responsibility of Fleet Commanders in Chief Atlantic and Pacific and the Chief for Naval Education and Training for Naval Education and Training Activities Ashore*

OPNAVINST 1500.44 *Responsibilities for Development of Personnel Training Requirements and Related Plans*

OPNAVINST 1500.52 *Surface Warfare Training System Policy, Organization, and Responsibilities*

OPNAVINST 1500.67 *Surface Warfare Training Requirements Review*

OPNAVINST 1500.69 *Navy Training Requirements Review (NTRR)*

OPNAVINST 1500.71 *Navy Training Feedback System (NTFS)*

OPNAVINST 1550.6 *Review of Navy Formal School Curricula and Instructional Literature*

OPNAVINST 1550.8 *Development, Review, and Approval of New or Modified Training Course Curricula*

OPNAVINST 3500.34 *Personnel Qualification Standards (PQS) Program*

OPNAVINST 5100.8 *Navy Safety and Occupational Safety and Health Program*

OPNAVINST 5100.19 *Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat*

OPNAVINST 5100.23 *Navy Occupational Safety and Health (NAVOSH) Program Manual*

OPNAVINST 5290.1 *Management and Operation of Navy Audiovisual Activities*

OPNAVINST 5510.1 *Department of the Navy Information and Personnel Security Program Regulation*

NAVPERS 18068 *Navy Personnel Manual*

**Chief of Naval Education and Training**

NAVEDTRA 130 *Task Based Curriculum Development*

NAVEDTRA 131 *Personnel Performance Profile Based Curriculum Development*

NAVEDTRA 132 *Management/Leadership/Seminar Curriculum Development*

NAVEDTRA 133 *Team Training Curriculum Development*

NAVEDTRA 134 *Handbook for Instructors of Group-paced Navy Courses*

NAVEDTRA 135 *Navy School Management Manual*



NAVEDTRA 10500 *Catalog of Navy Training Courses (CANTRAC)*

NAVTRADEV P-530-2 *Training Equipment Guide*

CNETINST 1500.1 *Catalog of Navy Training Courses (CANTRAC), NAVEDTRA 10500*

CNETINST 1500.5 *Naval Education and Training Command Training Path System for Instructors, Curriculum Developers, and Training Managers*

CNETINST 1500.12 *Glossary of Navy Education and Training Terminology*

CNETINST 1500.18 *Responsibilities and Procedures for NAVEDTRACOM Participation in Contractor Developed Training*

CNETINST 1500.20 *Safety Policy and Procedures for Conducting Training*

CNETINST 1500.21 *Development of Interactive Courseware (ICW) in Support of Instructional Systems*

CNETINST 1510.1 *Navy Integrated Training Resources and Administration System (NITRAS)*

CNETINST 1540.2 *Testing and the Measurement of Student Achievement*

CNETINST 1540.6 *Procedures for Ensuring Quality Training and Role of the Curriculum and Instructional Standards Offices*

CNETINST 1540.7 *Procedures for Requesting Navy Occupational Task Analysis Program (NOTAP) Data and Services*

CNETINST 1540.8 *Skills Profiles*

CNETINST 1540.12 *Appraisal Program for Entry Level and Specialized Skills*

CNETINST 1540.13 *Preparation of Course Master Schedule and Master Schedule Summary Sheet*

CNETINST 1543.4 *Technical Training Equipment (TTE)*

CNETINST 1550.10 *Production, Approval, Implementation and Cancellation of Training Programs and Materials*

CNETINST 1560.2 *Evaluation of Navy Training Courses for Civilian Academic Credit by the American Council on Education*

CNETINST 3500.3 *Personnel Qualification Standards (PQS) Program*

CNET 5100.2 *Safety and Occupational Health Program*

CNETINST 5290.3 *Chief of Naval Education and Training (CNET) Visual Information Program Management*

CNETINST 5300.1 *Naval Education and Training Command Talent Pool for Technical and Professional Assistance*

CNETINST 5311.1 *Computation of Instructor Requirements*

CNETINST 7500.2 *Technical Training Audit Program (TTAP)*

*Training Requirements Data Base Annual Report - Naval Education and Training Program Management Support Activity (NETPMSA)*

## **SECURITY REQUIREMENTS**

Classified information will be handled in accordance with the Department of the Navy Supplement to the DOD Information Security Program Regulation (OPNAVINST 5510.1)

## **SAFETY REQUIREMENTS**

Safety, occupational health, and hazard awareness information must be incorporated into the curricula of all appropriate training courses, as prescribed by CNETINST 1500.20 and in accordance with NAVEDTRA 135

## **SUMMARY**

This chapter has provided an overview of the Training Materials Managers Guide. Individuals assigned the responsibility of managing the development or revision of training materials should become familiar with the content requirements and format conventions for the management, curriculum, and support materials discussed in the three volumes of this manual as well as the applicable documents listed in this chapter.

## **PLANNING**

### **CHAPTER 2**

#### **TRAINING PROJECT PLAN**

##### **INTRODUCTION**

A curriculum development project is a complex undertaking, bringing together a wide range of human and material resources for the goal of creating quality training. Curriculum development consists of a series of interrelated processes, beginning with **Planning**. Planning consists of gathering information and building a curriculum development plan. The output product of this process is the *Training Project Plan (TPP)*. When approved, the TPP becomes the authorization to undertake a course revision, or a new course development project, and initiate resource requisitions.

##### **GOVERNING INSTRUCTIONS AND DIRECTIVES**

Throughout this chapter numerous instructions are cited. This is done to ensure that actions governed by instructions are carried out in accordance with the latest directives. Accordingly, instructions cited are assumed to be the most current, and series suffixes are not used. A manager should review the instructions listed in Chapter 1 to ensure that applicable requirements are considered throughout the curriculum development process.

##### **PLANNING FOR COURSE REVISION OR NEW COURSE DEVELOPMENT**

- Most TPPs will be for revisions to existing courses - reflecting the constant introduction of new equipments, processes, and technologies into the fleet. Although fewer in number, new course development projects respond to new requirements that cannot be met by revising an existing course.

- Planning is the beginning of the training materials development or revision process. The output, the Training Project Plan (TPP), provides the blueprint for the revision of existing courses or the development of a new course. "Revision," for our use, is defined in CNETINST 1550.10. In general, a revision means that the course mission has changed, course length is increased, or additional resources are required. A TPP may also be used to document a *decrease* in course length.

COURSE REVISION: Prior to starting the revision or development of new training material for existing training courses, a TPP will be developed and approved in accordance with CNETINST 1550.10.

NEW COURSE DEVELOPMENT: Completing a TPP for new course development requires establishing a *Course Identification Number (CIN)* and a *Course Data Processing Code (CDP)*, initiating entries for the *Catalog of Navy Training Courses (CANTRAC)* and *Navy Integrated Training Resources and Administration System (NITRAS)*, identifying preliminary resource requirements, and possibly planning for facilities requirements. This entails careful research and documentation. See NAVEDTRA 135 for specific guidance on establishing a new course.

## **JUSTIFICATION FOR CURRICULUM DEVELOPMENT AND REVISION**

There has to be a reason (or reasons) to undertake the development of a new course or the revision of an existing course. The justification for initiating the development of a new course or the revision of existing training materials may come from:

existing training materials may come from:

- *Navy Training Plans (NTPs)* (OPNAVINST 1500.8)
  - ▶ Introduction of new weapons systems or engineering, or changes/modifications to existing systems
  - ▶ “Life-cycle” documents reviewed and updated annually
- Tasking by higher authority
  - ▶ OPNAV. Introduction of new technologies, techniques, or equipment not supported by an NTP which can replace existing subjects, be added to an existing course, or require a new course.

Fleet manning requirements may dictate an increase (or decrease) in student throughput which requires an adjustment in resources
  - ▶ CNET. Addition of “by direction” topics or courses, or mandated course reductions.
- Internal course reviews and local command initiatives
  - ▶ Course reviews or data analyses determine students are not meeting course objectives and need additional “hands-on” time
  - ▶ Combining or resequencing subjects permits objectives to be met in less time
  - ▶ Data analyses or studies may show that a new course can “common core” subjects which are now taught in several separate courses

- External course reviews
  - ▶ Indicate problems with course content (obsolete objectives) or structure in terms of graduates not being able to perform on the job
- Surveillance and external feedback
  - ▶ Fleet Training Assessment Program (**FLETAP**) (CNETINST 1540.11). Used to describe training deficiencies in the working environment which may be met by revision to existing courses.
  - ▶ Navy Occupational Task Analysis Program (**NOTAP**) (CNETINST 1540.7). Lists the jobs performed by a rating, who performs them, and the frequency of performance. A survey of jobs performed within a rating may indicate a need to revise training.
  - ▶ Navy Training Requirements Review. Consists of course reviews by Fleet, Training Command, and Systems Command representatives to assess existing training and to identify inefficiencies, redundant or unnecessary material.
- Training Appraisal. Training appraisal is the process of evaluating both the training system and the output of its training program.

## **TRAINING PROJECT PLAN (TPP)**

- The TPP presents a blueprint for curriculum development which contains course data, justifications for the course revision or new course development, impact statements, milestones, and resource requirements

**Each project plan will be as unique as the project it describes.** Your project may not require every item of information included in the TPP Outline. Alternatively, your project plan may benefit from additional items and enclosures. The CCA and Functional Commander, working with the TPP developer, shall designate mandatory TPP elements, and possibly call for additional data which will reinforce the project plan. A sample package may be provided to guide developers, or additional requirements may be levied by command instructions. All data should be researched, referenced, and as accurate as possible. However, the TPP is recognized as a *planning* document, subject to revision.

- The following paragraphs provide some general information on TPPs

### **Purpose and Use of a TPP**

The TPP describes all training and training support elements required to provide trained personnel to operate and maintain systems or equipments, or perform tasks and functions. It provides a *Plan of Actions and Milestones (POA&M)* to achieve a predetermined implementation date. A TPP describes all the factors necessary to prepare and conduct a successful training program and attain optimum use of personnel, hardware, and funds. The course revision or development described in the TPP should meet, and not exceed, the training requirement.

### **Categories of Resources**

Course development and, often, course revisions require resources to develop or implement the proposed course. Resources fall into four broad categories: (1) facilities, (2) funding, (3) personnel, and (4) equipment. All four categories require long lead-time planning. An approved TPP is the authority to submit requests for resources.



- *Facilities* includes new construction and modification of existing structures, such as, interior arrangement, power requirements, and air conditioning. Basic categories are *Military Construction (MILCON)* and Special Projects, with the difference being cost, approval authority, and lead time.
- *Funding* includes all developmental and material costs anticipated for the project through the pilot convening
- *Personnel* includes instructional and support personnel to conduct the course. Any *increase* in personnel must be identified and justified. A *decrease* in course length may also require a manpower adjustment.
- *Equipment* includes specialized items, systems, tools, or equipments required to support and conduct training

## **INITIATING A TPP**

A TPP is a proposal to develop a new course or to revise an existing course. The decision to prepare a TPP can come from the commanding officer or officer in charge of the training activity or from higher authority. See CNETINST 1550.10 for all the uses of a TPP.

- Preparation of a TPP should be coordinated with the Functional Commander as well as the CCA

## **LOCATING DATA FOR COMPLETING A TPP**

- *Technical manuals.* Manuals should be used to the maximum extent possible as the basis for course content, equipment, and related material.
- *Logistic Support Analysis Report (LSAR).* A listing of jobs, and the detailed tasks to accomplish each job.
- *Navy Training Plans (NTP)*

- ▶ Part II Billet Requirements
- ▶ Part III Personnel and Training Requirements
- ▶ Part IV Training Logistic Support Requirements
- *NITRAS data. Master Course Reference File (MCRF)* displays outyear student loading.
- *Resource Requirements List (RRL)*. A composite listing of material necessary to implement the new course or the *Resource Requirement Changes* - a composite listing of additional material required to implement the course revision.
- Any source which can be used to justify the project and identify the costs

## **SELECTING CURRICULUM DEVELOPMENT METHOD**

- The Navy uses several different methodologies, or systems, for developing training programs. The Task Based method and the personnel Performance Profile Based method account for most training program development. Either system is equally capable of being used to develop all varieties of training programs. Each has characteristics and unique features that make it better suited for developing certain training programs.
- The *Personnel Performance Profile/Training Path System (PPP/TPS)* was originally designed for developing training programs that teach operation and maintenance of "hardware," such as equipments, subsystems, or a system. The PPP/TPS system is advantageous where equipment or procedures are subject to frequent updating or change. This manual, *NAVEDTRA 131: Personnel Performance Profile Based Curriculum Development Manual*, provides details on this method.

- The Task Based method was designed for developing training programs that teach performance of a job or function in which operation or maintenance of the hardware is usually incidental or secondary to actual performance of the job. NAVEDTRA 130: *Task Based Curriculum Development Manual* provides details on this method.
- Other factors to keep in mind when choosing a development system:
  - ▶ Which system is in predominant use by the end-user, the training activity? Navy instructors will have an easier time teaching and maintaining the training material when it has been developed using a system with which they are already familiar.
  - ▶ With which warfare community is the training program associated? Submariners have traditionally used the PPP/TPS system in developing their training programs. Aviators have just as traditionally used the Task Based or Task Analysis method for their training programs. The Surface community has used a mix of both systems, although the Task Based method is most common.
  - ▶ What is the type of training? Sometimes neither system seems to be particularly appropriate for the training program being developed because of some unique factor. Seminars may be conducted to present and exchange information; management and leadership courses may be concerned with roles and attitudes more than discrete measurement of performance. NAVEDTRA 132: *Management/Leadership/Seminar Curriculum Development Manual* and NAVEDTRA 133: *Team Training Curriculum Development Manual* describe alternative methods of development for these types of courses.

- Which system is selected should largely be determined by the needs, desires, and experience of those training activities which will implement and conduct the training program. It is the training activities' receptiveness to the delivered training program which will largely determine whether the training program succeeds or fails.

## **TPP OUTLINE**

The TPP shall contain all the data and information necessary to identify and justify course revision or development and resources required for the training course under consideration. Specific elements of data and information shall include the following items **where applicable**.

- **Cover Page**, to include:
  - ▶ The phrase "Training Project Plan for"
  - ▶ Complete course title (actual or proposed), with no abbreviations
  - ▶ Course Identification Number (CIN), if known. A new course development may not have a CIN assigned at the point the TPP is developed. CINs are assigned by the CCA as per guidance in CNETINST 1500.1.
  - ▶ The activity or organization for which the TPP is prepared. This is the sponsoring or tasking agency usually the CCA.
  - ▶ Name and address of the entity preparing the TPP
  - ▶ Month and year that the TPP is prepared. This is a publication date and may differ from the transmittal or approval letter date.

- ▶ Security classification (if required). TPPs should be unclassified if possible. See OPNAVINST 5510.1 for additional guidance on security classification.
- **Table of Contents.** The table of contents shall be page 2, immediately after the cover page.
- **Justification.** Cite specific references, correspondence, results of conferences, Front End Analysis (FEA) data, etc., where available.
  - ▶ Anticipated benefits of the proposed project:
    - Provides required training
    - Reduced course length
    - Increased student throughput
    - Impact of skill training requirements on the occupational classification system. A new course in “pipeline” training may provide an entrance or exit point to put graduates into the fleet earlier.
    - Reduced attrition and attendant costs by providing “common core” training
  - ▶ Sources of information or data
    - Tasking by higher authority. Cite specific correspondence.
    - Internal review has indicated a need for training best met by a new course or a revision to an existing course

External feedback/review. Current graduates are not able to perform on the job, or lack specific skills.

Training Path System (TPS) data. TPSs are normally accomplished as part of the curriculum development Design Phase, but TPS data should be used, if available.

- **Impact if the course development or revision is not undertaken.** Clearly describe the impact on fleet requirements and capabilities if the proposal is not undertaken.

---

Examples:

- ▶ Shortfall in numbers of trained personnel
- ▶ Inability to operate or maintain updated fleet equipment
- ▶ Dollars **not** saved by deleting obsolete objectives and consolidating remaining objectives into a shorter course

- 
- **Course Data Pages, to include:**

- ▶ The phrase "Course Data"
- ▶ Course title, with no abbreviations
- ▶ Course Identification Number (CIN), if assigned
- ▶ Course Data Processing code (CDP). This is a NITRAS identifier which will be different for each training site.
- ▶ Course Status. Identify whether new start or revision of training.

- ▶ Course Mission Statement. This is the purpose of the course, and responds to each of the questions below. Indicate if the course mission statement will change as a result of the course revision. The examples below illustrate the types of statements used to answer each question.

---

**WHO** is to be trained?

“...technicians in the IC rating (E-5 through E-7)...”,  
“...entry level enlisted Radiomen (SS)...”, “...  
Electronics Technicians, Fire Control Technicians,  
Aviation Antisubmarine Warfare Technicians, and  
Torpedoman’s Mate...”

**WHAT** job will the person be trained to perform?

“...operation, maintenance, and troubleshooting of  
the Inertial Navigation System...”, “...instruction and  
practical application in security fundamentals, basic  
message format, teletype typing proficiency,  
message tape preparation, teletypewriter circuit  
operating procedures, and basic safety  
precautions...”, “...AN/USM-484 Hybrid Test Station  
operational procedures, test procedures, emergency  
procedures, and scheduled maintenance  
procedures...”

**DEGREE OF QUALIFICATION**, or how well the person  
will be able to perform the job?

“...to perform tasks at the apprentice (journeymen,  
master) level...”, “...to the accuracy specified in  
supporting documentation...”

**WHERE** will the person utilize the training?

“...ashore and onboard amphibious assault (LHD-and  
LHA-1) class ships, inport and underway...”, “...in  
afloat and shore communication installations...”, “...in  
the submarine tender working environment...”

**CONDITIONS** under which the graduate will perform on the job.

“...under supervision and using technical references...”, “...in both field and shop conditions...”, “...under all conditions of ship readiness...”

---

- ▶ Occupational classification. Applicable rate, rank designator, *Navy Enlisted Classification (NEC)* or *Navy Officer Billet Code (NOBC)* of the intended input population, and the NEC or NOBC earned by course graduates. If it is proposed that an NEC will be issued or changed as a result of the revised course, consult NAVPERS 18068 for guidance.
- ▶ Prerequisites. List the prerequisites required of the trainees that are scheduled to attend the course. Prerequisites may be equipment, rate or rating-specific, basic skills, or course-specific.
- ▶ Course overview. A listing of course subjects. Note any changes from the previous project plan. For a new course this will be a description of the skills and knowledge to be attained. This is not intended to be the equivalent of a curriculum outline, or to contain objectives. The overview helps the Training Agency see what the course will actually contain. A proposed Course Master Schedule prepared in accordance with CNETINST 1540.13 can serve this purpose.
- ▶ Course length. Both current and planned course lengths should be given.
- ▶ Training sites. Commands or activities where the course will be taught.
- ▶ Number of classes. Number of classes planned per year for each site.



- ▶ Class capacity. Specify the minimum and maximum class capacity, and if the class capacity will vary between teaching sites.
- ▶ Planned Average on Board (**AOB**). This is:

$$\frac{\text{Course length in calendar days} \times \text{Planned input}}{365}$$

Planned input should include:

USN  
Reserves of all categories  
Other Services  
International training students

- ▶ Estimated instructor and support requirements

Provide the total number of instructor and support personnel required, current, and/or planned. CNETINST 5311.1 describes the factors required for standard instructor computation. Many of the factors listed, such as classroom and laboratory ratios and instructional periods, may not be known at this point. If the standard computations cannot be applied, provide the rationale for the instructor and support manning figure used.

- **Safety Risks and Hazardous Materials exposure.** Describe anticipated safety risks and exposure to hazardous materials which are absolutely necessary for training realism. Indicate if the proposed training will be designated "high risk" and fall under the requirements of CNETINST 1500.20. The incorporation of occupational safety and health considerations into training are defined in OPNAVINST 5100.23, and CNETINST 1500.20.

- **Curriculum development method recommended.** Curriculum development follows either task-based procedures (NAVEDTRA 130: *Task Based Curriculum Development Manual*), or PPP/TPS-based procedures (NAVEDTRA 131: *Personnel Performance Profile Based Curriculum Development Manual*). Some of the considerations used to determine the most appropriate curriculum development method may be found in this Chapter under **Selecting Curriculum Development Method**. Specify the development method recommended for use and the rationale for its selection.
  - ▶ List training materials to be produced under the curriculum development procedure selected
- **Compensation.** Provide recommended sources of compensation for both manpower and funding. Identify possible course cancellations/reductions, cross-utilization of instructors, etc.
- **Milestones.** A time-phased narrative or graphic representation commencing with TPP approval, milestones shall include identification of major developmental products or events relating to the training materials development method selected, and end with implementation. Projected completion dates for each key event shall be indicated.
- **Resources requirements.** Provide for each site a best estimate of the known and anticipated resources necessary to implement the training. For a revision, this will be the additional resources required. For a new development, this will be all resources needed to conduct the course. Identification of these resources does not constitute approval of the resources; *CNET Program Automated Tracking System (CPATS)* document numbers, cost account codes, and *Program Objective Memorandum (POM)* documentation must be forwarded.

It is recognized that not all resource requirements may be known when the TPP is submitted. This is an initial submission, subject to revision.

- ▶ Manpower. Identify officer, enlisted, and civilian billets required, the number of billets authorized, and the number of compensated billets that can be provided. Specify differences (if any).
- ▶ Funding. Identify by appropriation (*Operations and Maintenance (O&MN)*, *Other Procurement Navy (OPN)* and *Activity Group/Subactivity Group (AG/SAG)*) the one-time (initial) or recurring costs. For existing courses identify only the additional costs required to implement training.

Specific expense items should be identified and include the following: Curriculum development, supplies, travel, equipment, publications, and printing.

Contractor costs should be identified, including curricula development, instructors, and the operation and maintenance of training equipment

- ▶ Equipment. Related end-item equipment. "Related" means those specialized items, systems, or equipments required to support and conduct training.

List items, providing as much information as necessary to describe the item, such as part number, *National Stock Number (NSN)*, military designation, description, and source

Indicate the number of items needed to support the course and the number of items needed per class. Multiple training sites may require a further breakdown by site. In cases where some items are currently on hand, only list the *additional* items needed.

Provide line item and total costs

---

**EXAMPLE:** *Maintenance Trainers.* Normally, weapons system trainers designed to support on-equipment training, specially developed maintenance trainers, simulators/simulated trainer panels, and other simulator panels.

**EXAMPLE:** *Technical Training Equipment (TTE).* Operational equipment used for training purposes. Actual Weapon Replaceable Assemblies (WRAs), Line Replaceable Units (LRUs), Subsystem Replaceable Assemblies (SRAs), Shop Replaceable Units (SRUs), Circuit Card Assemblies (CCAs), weapons pylons, engines or equipment normally a part of a weapon system.

---

► Test Equipment

*Special Purpose Electronic Test Equipment (SPETE).* Test equipment designed to generate, modify or measure a range of functional parameters for a single electronic system or equipment. For example, test equipments which perform diagnostics and troubleshooting on specific aircraft. Normally provided by the SYSCOM.

*General Purpose Test Equipment (GPETE).* Electronic test equipment which may be used to test two or more equipments or systems, of basically different design, by generating, modifying or measuring a range of electronic functions.

---

**EXAMPLE:** Oscilloscopes, multimeters

---

Where GPETE is not being provided by a SYSCOM or other sponsor, the Command requests the equipment using form OPNAV 1543/1. GPETE is normally a long lead-time item.

- ▶ *Visual Information (VI)* devices such as projectors, video playback equipment, overhead projectors, projector screens, movie projectors, television monitors, etc.

The terms *Instructional Media Material (IMM)*, *Visual Information (VI)*, and *Audiovisual (AV)* used in conjunction with aids and devices refer to the same items. See CNETINST 5290.3 for additional guidance in this area.

- ▶ Special-purpose tools, alignment jigs and fixtures. GO/NO-GO gauges, adapters, and other tools especially designed for maintenance of weapon systems and normally listed in the technical manual.
- ▶ Common hand tools. Tools required to perform the training which are not unique to the equipment.
- ▶ Consumables. Items that are required for the course, such as magnetic computer disks, special printing paper, plating materials, connector parts, rags, cotton swabs, etc. List quantity required per class. Do not include items that are provided to the students and then retrieved after class.
- ▶ Training Devices. Engine cutaways, models, inert bombs/weapons and other devices especially prepared for demonstration and handling safety. Unless provided by an OPNAV sponsor, these items can have exceptionally long development and procurement lead-times. NAVTRADEV P-530-2 *Training Equipment Guide* refers.

*Specialized maintenance trainers and operator training devices (support training but cannot be substituted for operational equipment)*

*Operational and training software*, if not included with the hardware. Also, if the software must be modified, the scope of the modifications shall be included. This category also includes *Interactive Courseware (ICW)*.

*General purpose equipment dedicated to a specialized task*. For example, general purpose computers "wired in" and used to control training devices.

- ▶ Support equipment. Maintenance stands, ordnance skids, engine stands, mobile hydraulic and electrical power units, mobile air conditioning units, engine removal trailers, and similar materials. NOTE: This category does not include line maintenance test sets.
- ▶ Calibration standards. Calibration standard test equipment used in the calibration of electronics equipment and test sets. These items are identified by a "-CS" at the end of the part number.
- ▶ Faultable/Prefaulted modules. Modified modules, or modules that will be modified with insertable faults or malfunctions, for use in troubleshooting and performance testing.
- ▶ Trainer-peculiar materials. Items that are used in direct support of the trainer, such as trainer-peculiar special tools or special support equipment.
- ▶ Miscellaneous materials. Special clothing, goggles, standard work benches, special furniture, equipments, and items which do not fall under any category identified above.
- ▶ Ordnance/Ammunition/Pyrotechnics. Live, dummy, or inert. List by description and identifying numbers. Specify requirement per student and per class.

- ▶ Stand-alone computer systems and peripherals. For example, desktop computers and printers used to deliver instruction. *Not* administrative or office support equipment.
- ▶ Equipment refurbishment. Available equipment which can be used to support training after repair, overhaul, or modernization.
- ▶ Publications. Commercial, DOD, and military service publications or technical manuals required to conduct training. List by title, identification number, quantity required, and supplier.
- ▶ Visual Information (VI) aids. Provide a summary listing containing an estimate of the VI aids required to conduct the proposed training course. OPNAVINST 5290.1 is the basic reference for these items.
- ▶ Training material. The type and estimated quantity of training materials needed to conduct training. This includes instructor guides, trainee guides, instruction sheets, etc. Quantities and costs should be estimated through course pilot, or until training activity funding support can be established.
- ▶ Facilities. Identify requirements for MILCON or facilities modification. These requirements are highly situation-specific.

---

**EXAMPLE:** A major training device needs to be relocated by the command as part of a course development or revision project. Or, additional electrical power and cooling are needed to support new equipment being installed in an existing space. This can also include accommodations and adaptations for safety, such as vapor/gas eductors, filtration, incineration, hazardous materials storage, handling, and disposal facilities.

---

Early consultation with the training activity facilities manager is essential to determine the scope of the modification or construction, and the level of approval and funding required

*Funding thresholds are:*

Less than \$100,000 = Minor construction

Greater than \$100,000 = Special Project

Greater than \$200,000 = Military Construction (MILCON)

## **TPP APPROVAL**

A TPP is submitted via the chain of command for approval at the appropriate level as specified in CNETINST 1550.10

Approval of the TPP may be used as authorization for submission of CPATS, POM and procurement of long lead-time items such as major training devices.



## **STAGE ONE**

### **CHAPTER 3**

#### **PERSONNEL PERFORMANCE PROFILE TABLES**

##### **INTRODUCTION**

The development of equipment tables will follow the definition of operational and maintenance specifications. Development of subsystem and system tables follow, based on the equipment tables. Data gathering and analysis for task/function and background tables should begin as soon as requirements are recognized.

- A *Personnel Performance Profile (PPP)* table must be usable for training all groups of personnel (Coordinate, Direct, or Perform). The most serious error in PPP table development occurs when a table is developed for a specific course of instruction. This results in a table which includes a list of line items relating only to the skills and knowledge required for that course, and subsequently reduces the utility of the PPP table for other courses of instruction.
- PPP tables will be developed in accordance with guidance contained in this manual

##### **PPP REPOSITORY (PPP REP)**

The *Naval Education and Training Program Management Support Activity (NETPMSA)* has been designated by *Chief of Naval Education and Training (CNET)* as the PPP REP. It is tasked to:

- Maintain an ADP data bank of all approved and under development PPP tables
- Publish and distribute in the *Training Requirements Data Base (TRDB)* Annual Report a list of approved and under development PPP tables

- Ensure that developers are provided timely, effective access to all PPP tables when requested by the *Training Support Agency (TSA)*, *Training Agency (TA)*, or *Curriculum Control Authority (CCA)*
- Liaison with the CCAs for the assigning of numbers for PPP tables under development

## **PPP DEVELOPMENT**

- PPP tables used in support of new development or revision come from the following sources. Develop a PPP table listing identifying:
  - ▶ New tables to be developed. PPP table development is covered in Volume I, Chapter 3 of this manual.
  - ▶ Existing tables to be modified. Modifications permitted to existing tables to expedite their use in development are covered in this chapter.
  - ▶ Existing tables to be used unchanged

Change and Revision to existing PPP tables as a maintenance action is discussed in Chapter 9.

- Establish a PPP development schedule to meet the timeline of the Training Project Plan Milestones
- Existing PPP tables to be used unchanged or modified for use:
  - ▶ Screen PPP tables listed on the CNET *Training Requirements Data Base (TRBD)* report. Request finalized tables of interest from PPP REP. Tables listed as *Under Development (UD)* may be requested

from the cognizant sponsor and utilized for development, with the understanding that such tables may not be in their final form. The requester must be added to the developers' distribution list for updates and final documents.

- Obtain from the PPP REP a table number for each new PPP table to be developed and a number for the projected *Training Path System (TPS)*. (See Chapter 4 for additional discussion of TPS.)
- Draft new PPP tables
  - ▶ PPP tables represent the foundation knowledge and skills upon which a course is developed. Existing tables should be used to the maximum extent possible before consideration is given to developing a new table.
- Modify existing tables
  - ▶ The **only** modification permitted to existing PPP tables will be addition of subitems to existing line items or inclusion of new knowledge and/or skill line items to meet new job task requirements which must be incorporated into the course under development
- Submit new and modified PPP tables to CCA for review/ approval in support of further development
  - ▶ CCA grants preliminary approval for the new and modified PPP table drafts
  - ▶ Preliminary approval serves to establish these tables for use in further development. Subsequently, only changes mandated by changes in equipment, documentation, or operations/maintenance policy need be addressed.
- Submit all PPP tables used in developing the course as supporting documentation for the *Training Course Control*

*Document (TCCD).* (See Chapter 5 of this Volume for more discussion on submission of the TCCD.)

- After the Course Pilot
  - ▶ Forward newly developed and CCA-approved PPP tables to the PPP REP

Final approval for new and modified PPP tables will normally come after the first curriculum supported by the tables has been successfully piloted

- ▶ Modified PPP tables should be forwarded to the PPP's originator listed in the TRDB report

The PPP's originator will determine if the original PPP table maintained by NETPMSA should be modified

- PPP REP will add final or approved PPP tables to the data bank, removing the (UD) designation from the TRDB report, indicating that the approved table is available for distribution
  - ▶ PPP REP will maintain database and provide hard copy PPP tables to developer or as requested by the TA/TSA/CCA/*Course Curriculum Model Manager (CCMM)*
  - ▶ PPP REP will publish and distribute quarterly a list of PPPs that are approved and available for use

## **REVIEW AND APPROVAL**

The CCA will review and approve all Navy-developed PPP deliverables for compliance with NAVEDTRA 131, Volume I guidelines

## **SURVEILLANCE**

The only revisions to PPP tables which will be considered after curriculum has been developed, approved, and implemented, are those which are necessitated by changes in equipment, documentation, or operational/maintenance policy in the tactical program. In general, changes or revisions to PPP tables will cause either a Technical Change, Change, or Revision to curricula. Other than the above, routine surveillance of PPP tables is not required nor desired. Each CCMM, for courses under their cognizance, will:

- Review PPP tables for currency, adequacy, and accuracy whenever a course revision or new course development is undertaken
- Review technical changes to hardware or documentation and evaluate them for impact on existing PPP tables and curricula
- Provide impact comments and/or draft PPP tables when appropriate changes are indicated to the TSA or CCMM as applicable. Each CCMM, for courses under their cognizance, will make recommendations and provide impact comments and/or draft PPP tables to the CCA when changes are indicated for PPP tables or related courses.

## **STAGE ONE**

### **CHAPTER 4**

#### **TRAINING PATH SYSTEM**

##### **INTRODUCTION**

The *Training Path System (TPS)* describes the breadth and depth of required training. TPSs can be developed either for pipeline/continuum training or for individual courses. Most developers will be concerned with an individual course. The TPS is the first course-specific document. The procedures for development of the TPS are described in Volume I of this manual.

##### **DESCRIPTION AND APPLICATION OF THE TPS**

The TPS consists of the following elements:

- ***TRAINING OBJECTIVE STATEMENTS (TOS)***
  - ▶ The TOS describe the skills and knowledge to be learned for a specific group (Coordinate, Direct, Perform) of personnel
- ***TRAINING LEVEL ASSIGNMENTS (TLA)***
  - ▶ The TLA lists specific PPP line items to be taught, where each will be taught, and the degree of training to be provided for each line item
- ***TABLE ASSIGNMENT MATRIX (TAM)***
  - ▶ The TAM summarizes the training requirements for PPP Tables listed on the TPC by showing all TOS associated with each PPP table

- **TRAINING PATH CHARTS (TPC)**
  - ▶ The TPC graphically shows a complete training path for a category of learner by listing courses in the path, and the PPP Table Index listing all PPP tables covered by each course

## **TPS REPOSITORY (TPS REP)**

The *Naval Education and Training Program Management Support Activity (NETPMSA)* has been designated by *Chief of Naval Education and Training (CNET)* as the TPS REP. It is tasked to

- Maintain an ADP data bank of all approved and under development TPS
- Publish and distribute in the *Training Requirements Data Base (TRDB)* Annual Report a list of approved and *Under Development (UD)* TPS
- Ensure that developers are provided timely, effective access to all TPS when requested by the *Training Support Agency (TSA)*, *Training Agency (TA)*, or *Curriculum Control Authority (CCA)*
- Liaison with the CCAs for the assigning of numbers for TPSs under development

## **TPS DEVELOPMENT PROCESS**

- Screen TPS listed on the CNET TRDB report. Request finalized TPS of interest from TPS REP. TPSs listed as UD may be requested from the cognizant sponsor and utilized for development, with the understanding that such TPS may not be in their final form. The requester must be added to the developers' distribution list for updates and final documents.

- Establish a TPS development schedule to meet the timeline of the Training Project Plan Milestones
- Obtain from the TPS REP an identifying number for the TPS to be developed
- Draft TPS. (See Volume I, Chapter 4 for guidance on developing the TPS elements.)
  - ▶ Select or modify TOS model statements
  - ▶ Draft TLA for each PPP table listed in the PPP Table Index
  - ▶ Draft TAM
  - ▶ Draft TPC or PPP Table Index

The full TPC is required for pipeline/continuum training. If the TPS is being developed for a single course, only the PPP Table Index is required.

- Submit preliminary TPS to CCA as part of the preliminary TCCD (See Chapter 5 of this Volume for more discussion on submission of the TCCD.)
- After the Course Pilot,
  - ▶ CCA-approved final TPS is forwarded to the TPS REP

Final approval of TPS will normally come after the curriculum supported by the TPS has been successfully piloted

- TPS REP will add TPS to the data bank, removing the UD designation from the TRDB report, indicating that the approved TPS is available for distribution



- ▶ TPS REP will maintain the database and provide hard copy of TPS to developer or as requested by the TA/TSA/CCA/CCMM
- ▶ TPS REP will publish and distribute quarterly a list of TPSs that are approved and available for use

## **REVIEW AND APPROVAL**

The CCA will review and approve all Navy-developed TPS deliverables for compliance with NAVEDTRA 131 Volume I guidelines. The CCA has the option of calling for a review and approval of deliverables at any time.

## **TPS CONTROL**

- The CCA will control TPS development to ensure:
  - ▶ Analysis of the TPS for adequacy and accuracy. The TPS is the operational interpretation of the Course Mission Statement and establishes the boundaries of training materials development.
  - ▶ The preliminary TPS is viewed as a “working” document. The TPS will be reviewed by the CCA as part of the Training Course Control Document submittal to ensure that the essential linkage exists between the Topic Learning Objectives and the PPP table(s), to the training level specified by the TPS.
  - ▶ Upon final approval the TPS will be forwarded to the TPS REP for inclusion in the TPS ADP data bank. Existing TPS are available for review in accordance with procedures the NETPMSA TRDB Report.
  - ▶ The only changes to the TPS which will be considered

after the curriculum has been developed, approved, and implemented, are those which are necessitated by changes in equipment, documentation, or operational/ maintenance policy in the tactical program. In general, changes to the TPS will cause either a Technical Change, Change, or Revision to curricula.

## **SURVEILLANCE**

- Each CCMM, for courses under their cognizance, will:
  - ▶ Review TPS for currency, adequacy, and accuracy whenever a course Revision or new course development is undertaken
  - ▶ Review technical changes to hardware or documentation and evaluate them for impact on existing TPS and curricula
  - ▶ Provide impact comments and/or draft TPS when appropriate changes are indicated to the TSA or CCMM as applicable. Each CCMM or TSA, for courses under their cognizance, will make recommendations and provide impact comments and/or draft TPS for the CCA when appropriate changes are indicated for TPS or related courses.

## **STAGE TWO**

### **CHAPTER FIVE**

#### **TRAINING COURSE CONTROL DOCUMENT**

#### **INTRODUCTION**

The *Training Course Control Document (TCCD)* can be seen in two forms. In preliminary form it is the primary developmental document for a course. After course pilot, smoothed into final form, it is a management document. The approved preliminary TCCD serves as the authority for further development and provides the information needed by curriculum developers to create the training materials for a course. Thus, careful attention must be paid to the detail, content, and structure of the TCCD. Volume I, Chapter 6 of this manual provides guidance on developing a TCCD.

#### **DESCRIPTION AND APPLICATION OF THE TCCD**

The TCCD is a collection of products which expresses, in summary form, the content, structure, and essential management information for a course. Most of the information has already been developed; in the TCCD it is placed in a standard format for submittal. In application, a preliminary TCCD with a reduced number of elements is used developed during Stage Two and used during Stage Three to guide developers of course material. At Stage Five an updated, finalized TCCD records the description, content and resources for the course and is maintained as a life cycle document.

## PRELIMINARY TCCD COMPONENTS

Preliminary TCCD components must convey sufficient information to guide curriculum developers. They are recognized as developmental at this point and will be placed in final form after course pilot.

- **Curriculum Outline of Instruction**

- ▶ For the Curriculum Outline of Instruction, the Learning Objectives are arranged or sequenced in the order they are going to be taught. Parts, Sections, and Lesson Topics are established, and numbers assigned.
- ▶ Volume I, Chapter 5, of this manual describes the development of the Curriculum Outline of Instruction

- **Annexes**

TCCD annexes provide the resource requirements and time allocations for the course

- ▶ *Profile item-to-topic objective assignment chart.* Abbreviated **OAC** for "objective assignment chart," this chart provides a cross reference between the PPP items and the corresponding Lesson Plan locations for presenting the PPP items, Learning Objectives, and test items. The OAC essential to insure that all PPP line items are taught to the TOS level indicated in the TLA.
- ▶ *Resource Requirements List (RRL).* The RRL is a composite listing of *all known* material needed to conduct training. See Volume I, Chapter 2 and Chapter 6 of this manual for more detail on the development of the RRL. A resource cannot be cited by developers in the lesson plan or elsewhere unless it appears on the RRL.

## **FINAL TCCD COMPONENTS**

The final TCCD is an updated and smooth version of the Stage Two components, plus Front Matter. It consists of the following, and is submitted as a Stage Five deliverable.

- **Front Matter:**

- ▶ *Cover Page*
- ▶ *Letter of Promulgation*
- ▶ *Table of Contents*
- ▶ *Foreword.* (If required.)
- ▶ *Course Data*
- ▶ *Trainee Data.* Consists of the following:

**Personnel physical requirements**

**Security clearance**

**Prerequisites**

**Obligated service**

***Navy Officer Billet Code (NOBC) or Navy Enlisted Classification (NEC) earned***

- **Curriculum Outline of Instruction**
- **Annexes**

## **REVIEW AND APPROVAL**

The *Curriculum Control Authority (CCA)* will review and approve the Stage Two TCCD.

## **LETTER OF PROMULGATION**

- Upon completion of the Pilot Course, the CCA will authorize the use of the curriculum through a Letter of Promulgation. This authorization is a permanent part of the course audit trail. It is placed in the TCCD front matter immediately following the cover page.
- Implementing the course after the curriculum has been approved by the CCA and all resources are in place is the responsibility of the Functional Commander. See Chapter 8 of this Volume and NAVEDTRA 135 for additional information on implementation.

## **SURVEILLANCE**

Each *Course Curriculum Model Manager (CCMM)*, for courses under their cognizance, will:

- Review TCCD for currency, adequacy, and accuracy whenever a course change or revision is undertaken
- Review technical changes to hardware or documentation and evaluate them for impact on existing TCCD and curricula
- Make recommendations and provide impact comments and/or draft TCCD for the CCA when appropriate changes are indicated for their courses

## **STAGE THREE**

### **CHAPTER 6**

#### **CURRICULUM AND SUPPORT MATERIALS**

##### **INTRODUCTION**

Curriculum materials include all materials required for the presentation of information and the development of skill. Support materials are instructional materials and other devices used to support instruction.

##### **CURRICULUM CONTROL, DEVELOPMENT, AND COORDINATION**

- *Curriculum Control.* Control of curriculum will be accomplished by the *Curriculum Control Authority (CCA)* who assigns coordination, development, and support responsibilities to participants.
  - ▶ Schedules for the development of curriculum materials reflect new equipment deliveries and fleet training requirements
  - ▶ All development of curriculum and support materials is in response to an approved TPP and TCCD
- *Curriculum Development.* The developer will usually be the *Training Facility (TF)* designated as *Course Curriculum Model Manager (CCMM)* for the course to be developed or revised.
  - ▶ For multi-sited courses, the CCMM is responsible for establishing liaison with each TF to determine site-unique requirements and to solicit review comments on materials

- ▶ Coincident with the development of the Lesson Plan, Trainee Guide, and Test Package, is the procurement of Resource Requirements List items which are identified as part of the *Training Course Control Document (TCCD)*
- ▶ The CCMM is the interim review and approval agent for the development of training materials, up to the pilot convening of the course
- ▶ The CCMM is ultimately responsible to the CCA for the development of all curriculum materials

NAVEDTRA 135 discusses the CCMM's roles and responsibilities in greater detail and should be reviewed before revising or developing instructional materials

- ▶ The developer is responsible for incorporating into the curriculum all requirements residing in current instructions, such as incorporating safety details and developing a Testing Plan

NAVEDTRA 135 should be consulted to ensure all such requirements are addressed

- ▶ The developer will work with numerous entities, both inside and outside the Navy, to ensure that training materials are developed or acquired which meet accepted instructional standards and meet the development schedule

Assistance in meeting these requirements and professional guidance in the development of effective training materials may be obtained from the *Curriculum and Instructional Standards Office (CISO)*, where available. The role and responsibility of the CISO is discussed in NAVEDTRA 135 and CNETINST 1540.6.



- *Coordination of Curriculum Development.* Curriculum development for courses which are multi-sited and/or developed by agents other than the TF should, at a minimum, involve all TFs in the review of the curriculum materials.
  - ▶ The degree of TF involvement will be influenced by the approved *Training Project Plan (TPP)* milestones and CCA directions
  - ▶ In the absense of In Process Reviews, discussed later in this chapter, the developer should forward to the TF(s) for review and comment major segments of the course as soon as they are available rather than leaving the review until the total course is developed
  - ▶ The TF should review the material for technical accuracy and any problems they might have in implementing the material as written. This review should be expedited. Comments should be specific and include suggestions for correcting any errors or problems identified.
  - ▶ TFs may be called upon to pilot the material developed, provide instructors to participate at other sites in piloting the material, and/or provide pilot monitors. (See Chapter 7 of this manual for more information on pilots.)
  - ▶ If multiple Functional Commanders are involved, resource requirements and other factors which impact on the implementation of the final course should be coordinated with each Functional Commander as soon as requirements are identified

## CURRICULUM MATERIALS DEVELOPMENT

Development and approval of the curriculum materials will follow the events listed unless specifically waived by the CCA

- Developer reviews management materials
  - ▶ *Training Project Plan.* As soon as a firm requirement exists, a TPP will be submitted in accordance with CNETINST 1550.10. Development of the course described in the TPP can proceed while awaiting TPP approval, if authorized by the CCA.
  - ▶ *Personnel Performance Profile (PPP)/Training Path System (TPS).* The TPS will identify the PPP tables, individual line items, and the training level to which they will be taught. The PPP line items will form the core of the Lesson Topics.
  - ▶ *Training Course Control Document.* The approved TCCD will provide the Course Learning Objectives and Topic Learning Objectives; course sequence by Part, Section, and Lesson Topic; and proposed test points.
- Developer establishes a development schedule which meets the Milestones approved in the TPP
  - ▶ The sequence in which the material is developed must be dictated by each course's individual requirements, including such factors as lead time for *Instructional Media Material (IMM)* or training device development, availability of technical documentation, appropriateness of existing materials, and the number and experience of developers assigned to the effort

The preferred sequence of training materials development is:

Lesson Plan

Trainee Guide

Test Package

Support Material/IMM

- ▶ The schedule is an internal control document which should be monitored by the developer and the CISO
- ▶ Monitoring the schedule will lead to early identification of possible changes in the TPP Milestones. Changes in the TPP Milestones must be coordinated and approved by the CCA.
- Developer reviews content requirements and format conventions required by the CCA/CCMM TF in addition to those specified in this manual
  - ▶ If the developer is not experienced in application of the NAVEDTRA 131 process, the CCA may require the developer to submit a sample of each type of curriculum material to be developed. This is referred to as a "Cross Section."
  - ▶ The Cross Section and its contents will be specified by the CCA, if required
- Developer completes development of draft curriculum and support materials

- ▶ The Lesson Plan places the instructional process in the sequence established by the TCCD. In the Lesson Plan, the Topic Learning Objectives become discussion points, amplified as necessary to support the Course Learning Objectives.

Methods and procedures for Lesson Plan development are contained in Volume I, Chapter 6 of this manual

- ▶ Multiple Lesson Topics will normally be under development at one time. It is recommended that a single individual or team be given responsibility for developing a group of related Lesson Topics or Sections.
- ▶ All Lesson Topic development should be a coordinated effort to ensure a smooth transition from Lesson Topic to Lesson Topic, Section to Section, and Part to Part
- ▶ The Trainee Guide is designed to support instruction. Most essential are Job Sheets to carry out skill objectives in both practice and test situations.

Directions for developing effective Instruction Sheets are found in Volume I, Chapter 7 of this manual

- ▶ Tests measure the trainee's attainment of stated knowledge and skill objectives. Thus, tests are closely related to both the Lesson Plan and the supporting Trainee Guide Instruction Sheets.

Procedures for developing knowledge and performance tests are contained in Volume I, Chapter 8 of this manual and additional guidance on the administration of a testing program is provided in NAVEDTRA 135

- ▶ Support material, including IMM, may actually be developed by personnel not part of the developer's command. This situation may increase the amount of coordination or require longer lead time.

Volume I, Chapter 9 discusses the coordination required to develop IMM

Other support material, such as training devices, are governed by their own instructions and will be coordinated with the CCA

Procurement of technical manuals, textbooks, and government publications are governed by Supply System directives

- ▶ All material should be reviewed by at least one Subject Matter Expert or other designated reviewer beside the developer

## **CURRICULUM AND SUPPORT MATERIAL REVIEW AND APPROVAL**

During Stage Three the CCMM has direct responsibility for developing all curriculum and support materials in accordance with the approved TPP and TCCD

- Monitoring of the curriculum development process is accomplished by periodic *In Process Reviews (IPRs)*
  - ▶ IPRs are conducted for review of developmental products and to provide comments to the developer
  - ▶ IPRs should be scheduled at intervals depending on the length and complexity of the development project

- ▶ IPR participants include the CCA, CISO, and representatives from other TFs which will teach the course
- ▶ Reviewers will ensure that developed curriculum materials comply with the management materials, are technically accurate, meet content requirements of NAVEDTRA 131, and comply with other format conventions specified for the course
- ▶ If IPRs are not feasible, developer reproduces copies of all curriculum materials (including paper copies of IMM materials as practical) and forwards to the CCA and designated TFs for review and comment, as directed

Review will be completed within the guidelines listed below, plus 14 days mailing time, unless otherwise directed by the CCA.  
(See Figure 6-1.)

<u>EXPECTED COURSE LENGTH</u>	<u>REVIEW TIME</u>
Less than 3 weeks	30 days
3 weeks to 8 weeks	60 days
Greater than 8 weeks	90 days

**FIGURE 6-1: GUIDELINES FOR REVIEW OF CURRICULUM MATERIALS**

- Developer modifies curriculum materials to reflect the changes identified during review
- Developer/CCMM recommends pilot date to CCA
  - ▶ Readiness to pilot a course, or a segment of a lengthy course, is dependent upon the completeness of curriculum materials and availability of support materials such as IMM, trainers, fault insertion devices, etc.
  - ▶ Advise the CCA of readiness to pilot 90 days in advance. (See Chapter 7 of this Volume for additional guidance on pilot responsibilities.)

## **SUMMARY**

Each document produced during the curriculum development process should build and support all others. It is rare that only one part of the curriculum materials is being worked on at a time. It is therefore important that all personnel actively engaged in developing the training materials communicate and exchange material. Not only is the developer able to see how material supporting or building on his topic is being developed, but it serves as a review for content and accuracy.

## STAGE FOUR

### CHAPTER 7

#### PILOT COURSE

## INTRODUCTION

A pilot course is defined as the first full-length course conducted at a Navy school by Navy instructors using the curriculum and supporting training materials prepared specifically for that course. The purpose is to validate the curriculum and materials, to determine their effectiveness in attaining the course objective(s), and confirm course length. The *Curriculum Control Authority (CCA)* will determine those courses designated as pilot convenings. The pilot course process consists of the following elements:

- ▶ Preparation for pilot course convening
- ▶ Pre-pilot conference
- ▶ Pilot course convening and course monitoring
- ▶ Post-pilot conference
- ▶ Report of pilot course assessment



## **PREPARATION FOR PILOT COURSE CONVENING**

The structure and conduct of a pilot course will depend to a great extent on the length of the course, class convening schedule, and the extent of approved curriculum materials and support materials available

- A short course with infrequent class convenings will permit the conduct of a pilot, assessment of results, and incorporation of review comments prior to the next convening
- A complex, lengthy course, or the necessity to accommodate class schedules, may dictate use of a "rolling pilot," where data must be gathered and fed back to the developer for incorporation, while the pilot of later sections or convenings of the course continues
  - ▶ Segments of the piloted materials must integrate into the rest of the course. That is, previous training must support the materials being piloted; the piloted materials must support the rest of the course.
  - ▶ Temporary duty considerations preclude lengthy participation by support personnel outside the host *Training Facility (TF)*. Use senior, qualified TF personnel as available, preferably personnel NOT directly involved in writing the piloted course materials.
  - ▶ Have options available to utilize previously approved course materials if piloted segment produces abnormally high student attrition
  - ▶ If the piloted segment of a course is acceptable, it should be left in place after pilot. However, final approval of course materials by the CCA should be reserved until **all** revised materials have been piloted and reported upon. Considerations regarding use/correction of piloted segment training materials include:

If corrections are relatively minor, continue to instruct from the red-line materials while corrections are being incorporated into a smooth copy

If corrections result in re-writing or resequencing materials within Lesson Topics, return to use of previously approved materials until corrections are completed

If time and resources permit, pilot the revised materials a second time

### **Preparation for Pilot of New Courses**

The following procedures apply to preparation for pilot of new courses:

- *Determination of Pilot Course Convening Date.* The *Course Curriculum Model Manager (CCMM)* will submit a proposed pilot course convening date to the CCA, with copies sent to all other participating TFs as soon as a projected completion date for training materials development is available. Allow up to 90 days for instructor personalization and preparation.
- *Readiness to Conduct Pilot Course.* Not later than 90 days prior to the designated pilot course convening date, the TF scheduled to conduct the pilot is requested to assess and certify its readiness to conduct the pilot course. This readiness report should be addressed to the CCA. Copies should be transmitted to any other participating TF or other activities, and is to include the following elements:
  - ▶ A listing of present training material shortages and deficiencies which are projected to be corrected prior to the pilot course convening date
  - ▶ The state of completion, installation, and operability of training devices and laboratories which support the pilot course should also be considered

- ▶ A listing of training material shortages and deficiencies, if any, which are not expected to be corrected by the scheduled pilot course convening date, or for which delivery/correction dates cannot be determined. Include cognizant activity and estimated delivery/correction dates if known.
  - ▶ A listing and assessment of any other factors which, in the judgement of the commanding officer, could adversely affect the validity of the pilot course as a comprehensive evaluation of all instructional elements. Instructor preparation time and availability of representative students with the required prerequisites are among the factors to be considered.
  - ▶ An overall assessment of readiness to conduct the pilot course as scheduled. (Include status and completeness of the curriculum and supporting training materials, technical training equipment, *Government Provided Electronic Test Equipment (GPETE)*, training devices, laboratories, *Consolidated Shore Base Allowance List (COSBAL)* supply support onboard, etc.) Waiver for missing or deficient equipment normally will not be granted.
  - ▶ If the scheduled date is not recommended, an alternate date should be proposed
- *Pilot Course Convening Approval.* The CCA will evaluate the recommendations in the readiness report, approve a pilot course convening date, designate monitoring team members, and specify a due date for submittal of the Final (End of Course) Monitoring Progress Report.
    - ▶ This date will normally be 15 days after the estimated course completion date for courses less than 30 days in length, and 30 days after the estimated course completion date for courses 30 days or more in length
    - ▶ The convening date approval letter distribution will include all addressees of the readiness report

- **Pre-Pilot Surveillance.** After convening date approval and not later than 14 days prior to the approved pilot course convening date, the TF scheduled to conduct the pilot is requested to submit a message report if the pilot course should NOT be conducted on the approved date.
  - ▶ This is an exception report which can be made after pilot convening date approval if the facts and assumptions contained in the original readiness report have significantly changed. Its purpose is to stimulate timely recovery action if possible, and to notify pilot course support activities before attendance plans are finalized.
  - ▶ Significant changes occurring in the 2 weeks immediately preceding the pilot course convening date should be reported to the CCA by telephone

#### **Pilot of Revised Courses Developed From Existing Curricula**

For curriculum developed solely from previously piloted, approved, and promulgated curricula, the following procedures will be used to expedite curriculum development while retaining an option to pilot when the conditions warrant:

- The first convening of the course will be conducted using draft curriculum materials. The TF's *Curriculum and Instructional Standards Office (CISO)* will provide monitoring support for this class.
- Within 30 days after course completion, the TF will provide a synopsis of CISO and student critique comments with a recommendation to either continue development to final products, or conduct a formal pilot
- The CCA will select one of the following options for curriculum developed from approved curricula:
  - ▶ Approve curriculum, no pilot of materials required
  - ▶ Conduct pilot of entire course
  - ▶ Conduct pilot of revised portions of course only

## **PRE-PILOT CONFERENCE**

- Shortly before the pilot course convening date, the monitoring team chairman will convene the pre-pilot conference. Its purpose is to plan the validation process, assign monitoring team responsibilities consistent with the levels of representation available, and discuss/resolve any outstanding issues impacting on the conduct of the pilot. The following subjects should be addressed:
  - ▶ Assignment of responsibilities in accordance with the Pilot Course Monitoring Responsibilities Matrix (Figure 7-1)

Figure 7-1 provides a matrix of responsibilities and possible commands that can be assigned the responsibility. The matrix may be used by the CCA/CCMM to make assignments.

	TSA	TA	CCA	CCMM	TF
Chairman					
Attend pre-pilot conference					
Provide curriculum materials					
Provide instructor materials and class schedules to monitors					
Conduct pre-presentation meeting with instructor					
Monitor classroom and laboratory sessions					
Maintain time log					
Complete/submit applicable checklists					
Maintain personal red-line					
Attend daily critique sessions					
Annotate master red-line copy					
Maintain custody of master red-line copy					
Draft final Course Monitoring Report					
Review final Course Monitoring Report					
Attend post-pilot conference					
Forward Final Course Monitoring Report					
<b>NOTE:</b> It is recommended that CCMM/TF representation include the CISO.					

**FIGURE 7-1: PILOT COURSE MONITORING RESPONSIBILITIES MATRIX**

- ▶ Assignment of monitors and respective responsibilities
- ▶ Status of Management Materials
- ▶ Status of Curriculum Materials
- ▶ Status of Support Materials
- ▶ Status of applicable change recommendations
- ▶ Identification of instructors
- ▶ Status of pilot instructor's Lesson Plan personalization
- ▶ Specify Monitoring Report frequency and due dates
- ▶ A tentative date for the post-pilot conference
- All problems and discrepancies should be identified and resolved so that a final determination can be made as to the suitability of conducting the pilot course
  - ▶ The chairman will distribute a summary of the agreements reached and responsibilities assigned during the pre-pilot conference

#### **Responsibilities and Functions of the Pilot Monitoring Team**

- The pilot monitoring process is an evaluation of all training materials, both knowledge and performance, and it records in real-time all instructional presentations
  - ▶ It is NOT the responsibility of the monitoring team to develop or revise curriculum material during classroom/laboratory presentations
  - ▶ It IS the responsibility of the monitoring team to red-line the curriculum during the monitoring process

- ▶ If the monitoring team determines that the *Course Learning Objectives (CLOs)* are not satisfied, recommendations will be made to the CCA at the post-pilot conference and in the final report
- ▶ It is the responsibility of the CCA or *Training Support Agency (TSA)* to determine what action is necessary to accommodate the recommendations
- The CCMM or TF conducting the pilot course will generally provide the primary monitoring team members from the instructional staff
  - ▶ It is evident that the greatest range of tasks are the responsibility of the course personnel at the host training facility conducting the pilot course, with support from the training facility's CISO
  - ▶ To the maximum feasible extent, other TFs that will teach the course, or the developer, if the material was not developed by the host TF, should provide assistance to the host command in the course monitoring effort
- The pilot course monitor(s) should be:
  - ▶ Technically competent to provide the instructor technical assistance as required or capable of accessing a point of contact for technical assistance
  - ▶ Familiar with the development guidelines of NAVEDTRA 131 and the management requirements established in NAVEDTRA 135
  - ▶ Aware of the status and availability of all training materials associated with the particular curriculum
  - ▶ Familiar with approved and pending change recommendations to any training materials which could have an impact on the pilot course
  - ▶ Familiar with the objectives of the preliminary curriculum and approved training



- The purpose of conducting a pilot course is to validate the curriculum and support materials, and to determine their effectiveness in attaining the course objectives
  - ▶ The role of the chairman is to coordinate and manage the project, and summarize the results in the final course monitoring report
  - ▶ The pilot course monitors serve as the primary judges of the adequacy of a new or revised course. In this role, notes and comments regarding observed problems are later amplified to form the basis for recommending changes, completing Intermediate and Final Course Monitoring Reports, and, ultimately, in assessing the success or failure of the piloted course.
  - ▶ The course monitors are provided with all curriculum materials and references while observing instruction. Addendum 7-A, the Course Monitoring Outline Sheet, can be used to note problem areas. A summary of all course Monitoring Outline Sheets completed can thus provide a reference for daily and end-of-course critiques.
  - ▶ Addendum 7-B, the Course Monitoring Time Log, is used to record the actual time spent on each Lesson Topic, and in summary, provides the best estimate of total time required for the course
- The Chairman shall:
  - ▶ Maintain physical custody of the master red-lined curriculum and support materials, ensuring all consensus comments/recommendations of the course monitors are properly and accurately annotated
  - ▶ Chair and conduct critique sessions daily with the course monitors and incorporate comments into the master red-lined curriculum materials. Make the master red-line materials available to course monitors.

- ▶ Inform course monitors of the time and location for critiques
  - ▶ Conduct pre-presentation reviews of curriculum materials
  - ▶ Provide course monitors with presentation material that has been restructured by instructors in advance of presentation
  - ▶ Conduct and chair the scheduled post-pilot conference
  - ▶ Originate all Intermediate Pilot Course Monitoring Reports and the Final Pilot Course Monitoring Report
- Course Monitors shall:
    - ▶ Attend pre-pilot conference
    - ▶ Attend post-pilot conference
    - ▶ Be present for **ALL** classroom and laboratory sessions
    - ▶ Comment as appropriate on the administrative aspects of the pilot course conduct, using the Training Facility Administrative Review as a guideline (Addendum 7-C)
    - ▶ Comment as appropriate on curriculum and support material, using the Course Monitor Outline as necessary
    - ▶ Maintain personal red-line of curriculum materials for use during critiques
    - ▶ Attend **ALL** critique sessions held to review presentations and resolve comments for incorporation into the master red-line
    - ▶ Attend **ALL** pre-presentation reviews of curriculum materials requested by the chairman
    - ▶ Accept and use for monitoring the modified curriculum materials supplied by the chairman
    - ▶ Participate in the development of Pilot Course Monitoring Reports

- The Course Monitoring Outline Sheets, Addendum 7-A, are designed for use by course monitors and to serve as guides for noting subjects or items observed during the course monitoring process that require comment. Typically, one Outline Sheet will be completed by each course monitor for each Lesson Topic, but this is flexible and should be amenable to the structure of the course.

## **PILOT COURSE CONVENING AND COURSE MONITORING**

- The course will be conducted and managed in accordance with the Lesson Plan and the management guidelines established in NAVEDTRA 135
  - ▶ It is strongly recommended that the instructors not be the individuals who developed the material. The material should stand on its own. Often when the writers are also the presenters they will teach what they intended to have in the Lesson Topic and not necessarily the material which was actually written.
  - ▶ Often the CCA or the CCMM will establish as a policy that any student recommended for dis-enrollment from a pilot course will be reassigned to another course teaching the old curriculum. This procedure eliminates the perception that the trainee is being penalized by problems which may be inherent in the material being piloted. NAVEDTRA 135 provides additional information on student management. It and CCA/CCMM policies should be reviewed.

- Pilot monitors shall:
  - ▶ Attend critique sessions held at the completion of each instructional day to review presentations and resolve comments for incorporation into the master red-line
  - ▶ Unless otherwise directed by the chairman, assemble in assigned classroom 15 minutes prior to the start of scheduled instruction. Course monitors will return to the classroom or laboratory in sufficient time to ensure they are in place when class breaks are over.
  - ▶ Not participate in classroom/laboratory activities or aid the instructors in any way, nor will they discuss their comments or recommendations with the instructors during classroom/laboratory presentations. In no case shall course monitors conduct business with trainees present.

Course Monitoring Outline Sheets are usually prepared for each Lesson Topic, but basically it is whatever is appropriate to have meaningful data to discuss at the end-of-day critique and for input to the master red-line Lesson Plan, Trainee Guide, Support Material, and Tests.

## **POST-PILOT CONFERENCE**

- At the completion of the pilot, the pilot monitors, CCA, and representatives of the activity that developed the material will meet to discuss their observations and comments on all instructional material, the course management procedures, and the facilities
- The Course Monitoring Outline Sheets, Time Log, and the Facilities Administrative Review Checklist will be reviewed to ensure all issues are addressed. Appropriate corrective action will be recommended.

## **REPORT OF PILOT COURSE ASSESSMENT**

- The chairman, unless otherwise designated, will prepare the Monitoring Report. The report will be divided into the following sections:
  - ▶ Course Identification
  - ▶ Course Administration
  - ▶ Course Validation
  - ▶ Instructional Accuracy/Adequacy
  - ▶ Minority Report (If "NONE," so state)
  - ▶ Other (Optional)
- Long courses may require interim pilot course monitoring reports. The final course monitoring report should contain all interim reports, as applicable.
- If the course is to be multi-sited, any problem at these sites which will impair the implementation of the course will be discussed under the appropriate heading in the report. The site should be clearly identified to distinguish it from the pilot site.

### **Course Identification**

The course identification section will contain the following data on the pilot course:

- Title of the command conducting the pilot
- Course Title without abbreviations
- *Course Identification Number (CIN)* if assigned
- Inclusive dates of the pilot
- Name, rate and rank of all monitors/representatives and the commands or activities they represent

### **Course Administration**

The course administration section will contain the following data on the pilot course:

- *Facilities.* Major deficiencies impairing training and recommendation for correcting. If corrective action requires additional resources, it should be noted. The TF should prepare separate documentation for their Functional Commander for resources in accordance with NAVEDTRA 135.
- *Safety.* Personnel and equipment deficiencies impairing training and recommended corrective action. Any safety problems which occur during the pilot will be reported in accordance with NAVEDTRA 135 and CNETINST 1500.20 as well as being noted in the monitoring report.
- *Security.* Any deficiency impairing training, such as inadequate stowage for classified materials, or affecting the trainees assigned to the course, such as delays in obtaining necessary clearances.
- *Allocation.* Course and/or topic time, student-to-instructor ratios, and effectiveness of classroom-to-laboratory time allocations with recommendations when times deviate more than 10 percent.
- *Critique Sheets.* Summarize comments from the Outline Sheets.

### **Curriculum Validation**

The curriculum validation section will containing the following information on the pilot course:

- *Lesson Plan.* Statement as to attainment of objectives, recommendations, instructor/trainee preparation, major deficiencies, etc.
- *Trainee Guide.* Statements as to the adequacy and organization of all Instruction Sheets.
- *Equipment/Tools.* Comments on the quantity/quality of equipment and

tools, their adequacy in support of Learning Objectives, and trainee's ability to use.

- *Support Materials.* Comments on the type, quality, quantity, and adequacy to support Learning Objectives.
- *Instruction.* Comments on the quality and role of instruction in the attainment or lack of attainment of Learning Objectives.
- *Testing.* Comments on the testing strategy, test/test items, and quantity to support uninterrupted training.

### **Instructional Accuracy/Adequacy**

This section will address the accuracy, adequacy, sequencing, and overall effectiveness of the training presented in attaining the stated Learning Objectives

### **Minority Report**

This section provides an opportunity for monitors to provide any alternatives to the recommendations presented in the previous sections. If no minority comments are put forth, it should be noted.

### **Other**

If any other items should be brought to the CCA's attention but do not fit under any of the other sections, they would be addressed here

## **PILOT COURSE CORRECTIONS AND ADJUSTMENTS**

- Based on the findings and comments recorded during the pilot course, it is usually necessary to make corrections and adjustments to the training materials prior to approval and implementation
  - ▶ CCA may authorize TF at which the pilot was taught to use the approved red-lined curriculum while the developer incorporates the approved changes in the final curriculum



- ▶ CCA may authorize all TFs to use approved red-lined curriculum while the developer incorporates the approved changes in the final curriculum
- ▶ CCA may direct developer to incorporate approved red-lined changes in the final curriculum, but may *not* authorize any TF to use red-lined curriculum
- ▶ CCA may direct developer to incorporate approved red-line and require a second pilot
- Detailed direction is provided to the developer by CCA on what corrections and adjustments are to be made
- Limitations
  - ▶ Any modification to training materials which **does not** affect the course mission statement or require additional resources may be corrected as a result of the pilot

---

**EXAMPLES:**

Revise objectives as necessary to support the course mission

Add, delete, or resequence Lesson Topics

Adjust Lesson Topic periods and ratios

Add or delete support material such as transparencies, wall charts, and instruction sheets

---

- ▶ Any modification to training materials which **does** affect the course mission statement or require additional resources may not be corrected without modification and approval to the TPP

---

**EXAMPLES:**

Work outside the course mission statement (expand or reduce scope)

Change minimum and maximum class size, established course length, *Average On Board (AOB)*

Require additional resources:

Equipment  
Facilities  
Personnel  
Funding

---

**SUMMARY**

The pilot course determines how well the Stage Three curriculum materials work in actual application. The Pilot Course Monitoring Report summarizes the results of the pilot course, and serves as the basis for making final corrections to the "red-line" materials. Placed in smooth form, the curriculum is ready for Stage Five, Implement Final Curriculum.

**ADDENDUM 7-A**

**COURSE MONITORING OUTLINE SHEET**

**COURSE MONITORING OUTLINE SHEET**

MONITOR NAME \_\_\_\_\_ REPRESENTING \_\_\_\_\_

DATE \_\_\_\_\_ UNIT/LESSON TOPIC NUMBER \_\_\_\_\_

LESSON TOPIC \_\_\_\_\_

CLASSROOM/LAB ROOM NUMBER OR LOCATION \_\_\_\_\_

1. Were LESSON PLAN components accurate and in correct format?

a. Front Matter

b. Learning Objectives

c. Discussion Points

d. Related Instructor Activity

e. Instructor/Trainee Preparation

f. Other

2. Were TRAINEE GUIDE components accurate and in correct format?
  - a. Front Matter
  - b. Outline Sheet
  - c. Information Sheets
  - d. Assignment Sheets
  - e. Job Sheets
  - f. Diagram Sheets
  - g. Problem Sheets
3. EQUIPMENT/TOOLS
  - a. Was equipment correct and available in sufficient quantity?
  - b. Were tools correct and available in sufficient quantity?

4. SUPPORT MATERIALS/INSTRUCTIONAL MEDIA MATERIAL
  - a. Was support material relevant to the lesson topic?
  - b. Is the special emphasis provided by support material necessary?
  - c. Are IMM clear and legible?
5. INSTRUCTIONAL ACCURACY/ADEQUACY
  - a. Is the content accurate?
  - b. Is the material presented in a logical sequence?
  - c. Does the lead-in information motivate the student to pursue the material?
  - d. Do the teaching-learning activities encourage productive learning?
  - e. Is the material written in a manner to allow maximum student participation?

- f. Is there opportunity for review and practice?
- g. Does the material effectively teach the behaviors specified in the Learning Objectives?
- h. General Information accuracy:
  - (1) Are abbreviations, terms, and symbols accurate?
  - (2) Are operational characteristics, capabilities, and limitations accurate?
  - (3) Is documentation accurate?
- i. Physical Information accuracy:
  - (1) Is information on major and associated components accurate?
  - (2) Is information on displays, controls, and indicators accurate?

**j. Functional Information accuracy:**

- (1) Is information on functional operation accurate?**
- (2) Is information on controls and indicators accurate?**
- (3) Is information on computer software, operational, and maintenance programs accurate?**

**k. Interface Information accuracy:**

- (1) Is information on physical interface accurate?**
- (2) Is information on functional interface accurate?**

**l. Operational Information**

- (1) Is information on initialization accurate?**
- (2) Is information on normal operational tasks accurate?**
- (3) Is information on casualty/degraded modes accurate?**



(4) Is information on securing/shutdown accurate?

(5) Is information on personnel and equipment safety accurate?

m. Maintenance Information

(1) Is information on preventive maintenance procedures accurate?

(2) Is information on operational tests and diagnostic programs accurate?

(3) Is information on malfunction indications accurate?

(4) Is information on fault isolation procedures accurate?

(5) Is information on alignment, calibration, and adjustment accurate?

(6) Is information on disassembly, repair, and reassembly accurate?

- (7) Is information on tools and test equipment accurate?
- (8) Is information on post-repair procedures accurate?
- (9) Is information on personnel and equipment safety accurate?
- (10) Is information on maintenance policy accurate?

**6. INSTRUCTION**

- a. Did the instructor(s) demonstrate adequate preparation?
- b. Did the instructor(s) demonstrate appropriate instructional methods and techniques?
- c. Depth of coverage
  - (1) Was the depth of coverage appropriate in relation to the objectives?
  - (2) Was the depth of coverage appropriate in relation to the experience level of the trainees?

- d. Did the instructor(s) demonstrate appropriate questioning techniques?
- e. Was the instructor(s) presentation pertinent to DPs?

**7. TESTING**

- a. Are tests given which cover too much or too little material?
- b. Do tests adequately measure trainee comprehension of learning objectives?
- c. Are performance tests indicative of actions performed on the job?
- d. Are sufficient test items and alternative forms of tests available?
- e. Are all trainees tested under the same conditions?
- f. Are performance tests similar to, but not the same as, job assignments?

g. Is test security maintained?

h. Test data:

- (1) Number taking test \_\_\_\_\_
- (2) Number passing test \_\_\_\_\_
- (3) High score \_\_\_\_\_
- (4) Low score \_\_\_\_\_
- (5) Median score \_\_\_\_\_
- (6) Minimum passing score \_\_\_\_\_
- (7) What remedial options (if any) were utilized?

**ADDENDUM 7-B**

**COURSE MONITORING TIME LOG**

# COURSE MONITORING TIME LOG

COURSE TITLE	CIN

---



---

CLASSROOM/LAB NUMBER OR LOCATION

MONITOR NAME	REPRESENTING

[illegible]

COMMENT REQUIRED IF ACTUAL TIME VARIES BY +/-10% FROM SCHEDULED TIME.

**ADDENDUM 7-C**

**TRAINING FACILITY ADMINISTRATIVE REVIEW CHECKLIST**

**TRAINING FACILITY  
ADMINISTRATIVE REVIEW  
CHECKLIST**

MONITOR NAME \_\_\_\_\_ REPRESENTING \_\_\_\_\_

DATE \_\_\_\_\_ UNIT/LESSON TOPIC NUMBER \_\_\_\_\_

LESSON TOPIC \_\_\_\_\_

CLASSROOM/LAB ROOM NUMBER OR LOCATION \_\_\_\_\_

**1. FACILITIES**

**Yes/No Comments**

- a. Is the learning process aided by environmental conditions with respect to:

(1) Temperature?

(2) Lighting?

(3) Space?

(4) Absence of distractions?

- b. Are the laboratory facilities:

(1) Properly arranged?

(2) Supportive of skill objective accomplishment?



2. PERSONNEL AND EQUIPMENT SAFETY      Yes/No    Comments

a. Are safety precautions:

(1) Adequately identified?

(2) Prominently displayed?

(3) Stressed in instructional presentations?

(4) Enforced when performing tasks?

b. Are existing hazards adequately identified?

c. Is standard safety equipment available for use?

3. SECURITY

a. Are trainees advised of proper security measures?

b. Is the dissemination of classified material or information on a strict "need to know" basis?

c. Is the use of classified material confined to classroom or laboratory?

- |                                                                                                    |                 |
|----------------------------------------------------------------------------------------------------|-----------------|
| d. Is classified material accurately and prominently marked?                                       | Yes/No Comments |
|                                                                                                    |                 |
| e. Is access to classroom or laboratory controlled during classified presentations or discussions? |                 |

**4. ALLOCATIONS**

- a. Are trainee-to-instructor ratios considered optimum within:
  - (1) Classroom?
  - (2) Laboratory?
- b. Is classroom-to-laboratory time allocation effective?

**5. CRITIQUE SHEETS**

- a. Are critique sheets used?
- b. Do responses on critique sheets indicate the trainees have achieved knowledge and skill requirements?

## **STAGE FIVE**

### **CHAPTER 8**

#### **IMPLEMENT FINAL CURRICULUM**

##### **INTRODUCTION**

Implementation takes place after the pilot course has been conducted and the corrections and adjustments to the training materials indicated by the pilot course have been accomplished

- CCA Approval
  - ▶ Authorization to use curriculum and support materials is granted by the CCA through a Letter of Promulgation. This approves the material for use in support of Navy training.

Use of "red-line" material, or distribution of smooth curriculum without a Letter of Promulgation does not constitute approval. Such use of piloted material is an interim measure only and is not considered implementation.

- Functional Commander Approval
  - ▶ Where the CCA and the Functional Commander are different, the functional commander conveys acceptance of the course to the CCA. The CCA authorizes implementation of the course by letter of promulgation when the material has been approved by the CCA and all required resources are in place

- ▶ When the same course is taught at facilities under the cognizance of more than one functional commander, the respective functional commanders will convey their acceptance of the course to the CCA. The CCA will issue the letter of promulgation.
  
- ▶ Figure 8-1 provides sample text for a letter of promulgation

**Subject: LETTER OF PROMULGATION**

**Course Title: COMMERCIAL UTILITY CARGO VEHICLE  
(TYPE A), OPERATION AND MAINTENANCE**

**Course Identification Number: A-234-5678 Revision A**

- 1. The Lesson Plan and related support material constitute the approved curriculum for this course.**
- 2. Modifications to this curriculum must be submitted in accordance with procedures provided in CNETINST 1550.10.**
- 3. This curriculum supersedes all previous curricula for the Commercial Utility Cargo Vehicle (Type A), Operation and Maintenance.**

**FIGURE 8-1: Letter of Promulgation Sample Text**

- CCMM Responsibilities
  - ▶ Ensure all sites are ready to train
  - ▶ Accommodate site-unique training considerations
  - ▶ Distribute reproduction masters of all curriculum materials to all TFs
  - ▶ Distribute support materials consistent with the TPP or as directed by the CCA/Functional Commander
  - ▶ Submit initial *Navy Integrated Training Resources and Administrative System (NITRAS)* and *Catalog of Navy Training Courses (CANTRAC)* data for new courses
- CCMM and TF(s)
  - ▶ Certify instructors to teach the course and supervise personalization of Lesson Plan
  - ▶ Follow special procedures established for certification of instructors of high-risk courses
  - ▶ Coordinate administrative and support functions:
    - CISO - update master record; begin tracking training quality indicators
    - Student Control - changes to trainee input or graduation processing
    - Medical (if appropriate)
    - Personnel Support Activity (PSA)/Personnel Support Detachment (PSD)* (if appropriate)
  - ▶ Order consumables and other support materials. (This should be coordinated with CCMM and Functional Commander to avoid duplication of effort or funding conflicts.)

## **SUMMARY**

After implementation, responsibility for curriculum maintenance is assigned to the CCMM. All future modifications to course materials fall under the guidance of Volume III, Chapter 9. Course management is carried out by all sites in accordance with NAVEDTRA 135.

## **EVALUATION**

### **CHAPTER 9**

#### **EVALUATION, SURVEILLANCE, AND TRAINING MATERIALS MODIFICATION**

### **INTRODUCTION**

Training materials evaluation will be implemented by the *Course Curriculum Model Manager (CCMM)* with the cooperation of the *Training Facilities (TFs)* teaching the course. Evaluation is the overall process of quality management of training materials during the life cycle of a course. Surveillance is a component part of evaluation. Training Materials Modification incorporates the results of evaluation and surveillance into the training materials to keep them accurate and up to date.

### **EVALUATION**

- The central concept behind evaluation is the constant improvement of training materials through a process that:
  - ▶ Provides a means of keeping training materials current and accurate
  - ▶ Is responsive to changing training requirements and equipment/documentation alterations
  - ▶ Is open to innovation
- Evaluation consists of a number of programs which either individually or collectively evaluate the instructional materials, the instruction, the instructors and the trainees. NAVEDTRA 135 describes the various programs used to evaluate the effectiveness and efficiency of the total training program. The



portion of the evaluation program which concentrates on the curriculum is organized around two major functions, *surveillance and training materials modification*.

- *Surveillance* involves
  - ▶ Monitoring hardware documentation and changes for impact on existing training materials
  - ▶ Detecting errors or deficiencies in existing training materials and initiating the necessary corrective action
- *Training Materials Modification* is the result of surveillance. It involves actual alterations to training materials. Alterations range from Interim Changes, such as the correction of clerical errors and insertion of titles, to Revisions such as changes to Course Learning Objectives.

## **SUPPORT, COORDINATION, AND CONTROL**

- For courses supported by a *Training Support Agency (TSA)*, both the CCMM and TSA will be responsible for the surveillance of, and the development of, changes to assigned training materials
- For courses life-cycle supported by a TSA, the TSA shall introduce Technical Changes to curriculum necessitated by changes in tactical equipment, documentation, maintenance policy, or training-unique equipment
- For all courses not life-cycle supported by a TSA, the CCMM will perform surveillance and introduce other modifications to curricula

## **CATEGORIES OF MODIFICATION TO TRAINING MATERIALS**

- *Interim Change.* A minor modification to training materials to correct editorial, typographical, or technical errors, teachability, safety, or urgent Type Commander-promulgated subjects. An Interim Change does not require a *Training Project Plan (TPP)*.
  - ▶ An Interim Change will not alter the Course Learning Objectives or Topic Learning Objectives
  - ▶ The Commanding Officer of each TF teaching a course may approve Interim Changes made by the TF to curriculum it teaches
  - ▶ Interim Changes will be reported to the CCMM within 5 working days
  - ▶ The CCMM will incorporate Interim Changes in the next promulgated change to the curricula
  - ▶ If the Interim Change was generated due to site-unique circumstances, the CCMM will evaluate the Interim Change and, upon concurrence, will issue an approval letter. CCMM approval shall specify that the change is unique to the submitting site and will not be included in future changes promulgated by the CCMM.
  - ▶ If the CCMM does not concur with an Interim Change as submitted, the issue will be forwarded to the CCA for resolution
  - ▶ Copies of the Interim Change will be forwarded to the *Curriculum Control Authority (CCA)*, and TSA as appropriate. Figure 9-1 is a sample letter for forwarding an Interim Change.

**EVALUATION**  
**EVALUATION, SURVEILLANCE, AND**  
**AND TRAINING MATERIALS MODIFICATION**

**NAVEDTRA 131**  
**FEBRUARY 1993**

From: Commanding Officer, Training Facility  
To: Commanding Officer, Course Curriculum Model Manager  
Subj: INTERIM CHANGE TO COURSE A-234-5678, COMMERCIAL UTILITY  
CARGO VEHICLE (TYPE A) OPERATION AND MAINTENANCE  
Ref: (a) NAVEDTRA 131

1. Discrepancies and/or errors have been encountered in the Lesson Plan, and the following pen and ink Interim Changes have been made:

In Volume 1, on page 4-4-5, change the part of item 3. a. which reads:

- (5) Steering/Wheels/Tires
- (6) Brakes

to read:

- (5) Steering Wheels/Tires/Tubes/Rims
- (6) Brakes/Shoes

2. This Interim Change is in accordance with reference (a) and has been implemented at this command. Request dissemination to other TFs teaching this course.

(TF Commanding Officer)

Distribution:  
Other TFs

**FIGURE 9-1: INTERIM CHANGE LETTER**

- *Change.* Any modification to training materials that does not affect the course Learning Objectives or require additional resources. A Change does not require a TPP.
  - ▶ Changes will be prepared and promulgated by the CCMM
  - ▶ Each Change will incorporate all outstanding Interim Changes
  - ▶ If a conflict exists between a CCMM and another TF over how an Interim Change will be incorporated into the next Change, the matter will be referred to the CCA for resolution
  - ▶ For TSA-monitored courses, the TSA shall monitor Changes to ensure technical adequacy and accuracy
  - ▶ Formatting, production, and distribution of CCMM-originated Changes shall be accomplished by the CCMM
  - ▶ Copies of all Changes will be distributed to each TF teaching the course, the CCA, and TSA (for TSA-supported courses)
  - ▶ Changes will be issued by letter as shown in Figure 9-2

From: Commanding Officer, Naval Construction Training Center  
To:  
Subj: CHANGE 2 TO COURSE A-234-5678, COMMERCIAL UTILITY CARGO  
VEHICLE (TYPE A) OPERATION AND MAINTENANCE  
Ref: (a) NAVEDTRA 131  
Encl: (1) Lesson Plan Change Pages  
(2) Trainee Guide Change Pages

1. Incorporate enclosure (1) into the Lesson Plan for subject course. Incorporate enclosure (2) into the subject course Trainee Guide. This Change, which is in accordance with reference (a) incorporates Interim Changes 2-1 through 2-16 and is approved for use. Subsequent Interim Changes will be reflected in Change 3.

(CCMM Commanding Officer)

Distribution:  
NCTC TF

### FIGURE 9-2: CHANGE APPROVAL LETTER

- *Technical Change.* A Technical Change addresses any change to tactical (shipboard) or training-unique equipment or documentation originating in the TSA's parent material agency and affecting promulgated curricula. A Technical Change does not require a TPP.
  - ▶ A Technical Change may or may not affect Topic Learning Objectives, but *does not* affect course length, resources, or the Course Learning Objectives

- ▶ The TSA develops and forwards a Technical Change to the CCMM
- ▶ The Technical Change will consist of smooth change pages to the curricula, with sufficient copies to distribute to all activities teaching the affected course
- *Revision.* A modification to the Course Learning Objectives, increase in course length, or training materials modification that requires additional resources. A Revision always requires a TPP.
  - ▶ A Revision incorporates previous changes and supersedes preceding editions of the training materials
  - ▶ Revisions require the development and submission of a TPP for approval at Functional Commander or higher level. Volume I, Chapter 2 of this manual provides guidance for developing a TPP.
  - ▶ Revisions to be developed by a TSA to TSA-monitored courses shall be undertaken only with TSA concurrence and acceptance of funding responsibility for development and review of the Revision
  - ▶ A developer (TF or TSA) shall be assigned for an approved revision effort. The development process described in Volume I, appropriately modified by CCA and TSA concurrence, shall be applied to Revisions.
- The intent of the Change structure is to allow expedient updating of curricula while still maintaining consistent instructional standards throughout the *Naval Education and Training Command (NAVEDTRACOM)*. Revision to courses will not be undertaken solely to change format.

- Figure 9-3 describes the originator, promulgation authority, reproduction and distribution activity, and reviewing authority for Interim Changes, Changes, Technical Changes, and Revisions to curricula

Type of Modification	INTERIM CHANGE	CHANGE	TECHNICAL CHANGE	REVISION
Originator	TF	CCMM	TSA	Per TPP
Pre-Promulgation Review	None	None	None	Per TPP
Promulgation Authority	CCMM	CCMM	CCMM	CCA
Reproduction/Distribution	CCMM/TF	CCMM/TF	Repro: TSA Dist: CCMM	Per TPP

**FIGURE 9-3: MODIFICATION APPROVAL/REVIEW MATRIX**

## **INTERNAL EVALUATION**

Responsibility for internal course evaluation lies with both the CCMM and with all TFs teaching the course

- Internal Evaluation shall be conducted in accordance with CNETINST 1540.6 and NAVEDTRA 135
- Internal Evaluation will be done by all TFs for each course taught with the objective of ensuring that:
  - ▶ The course training materials match the CCMM master materials

- ▶ The *Resource Requirements List (RRL)* requirements for curriculum, audio-visual materials, and references are met
- ▶ Evaluation of all hazardous laboratory situations to eliminate or minimize training procedures that have potential for risk to the trainee. CNETINST 1500.20 refers.
- ▶ A review of applicable safety regulations and precautions to ensure they are included in appropriate areas throughout the curriculum. This includes *Training Time Out (TTO)*, *Drop-on-Request (DOR)* and Pre-Mishap Plan in accordance with CNETINST 1500.20 and NAVEDTRA 135.
- ▶ The *Technical Training Equipment (TTE)*, tools, materials, and equipment supporting the course are safe, serviceable, accurately configured, and meet RRL requirements
- ▶ The instructional environment is adequate and conducive to learning
- ▶ All instructors are certified in accordance with CNETINST 1500.5 and TF directives
- ▶ Testing and measurement of trainee achievement are in compliance with CNETINST 1540.2 and applicable Functional Commander directives
- ▶ Feedback action items on course content are followed up. Determine that all approved modifications have been incorporated into the curriculum.
- ▶ Available external evaluation information is used to assess the course in terms of meeting current and projected fleet requirements



- Instructional Staff evaluation. To ensure the quality of the instructional staff, all TFs will have an instructional staff evaluation program with feedback and discrepancy correction tracking components.

## **EXTERNAL EVALUATION**

- There are two purposes for External Evaluation:
  - ▶ To determine whether the skills taught are job-specific
  - ▶ To determine whether the course graduates can perform those skills in the work environment
- **Sources of External Feedback.** External feedback data can be obtained from several sources. All TFs are to use all available data sources in determining the effectiveness of their training courses. The following are examples of some sources:
  - ▶ *The course graduates and their immediate supervisors* are two separate sources of information on the effectiveness of the existing courses. Evaluators must be aware of, and take into consideration, any interim training received by the graduates before reporting to their work station. Evaluators must also consider any time lapse between graduation from the course of instruction and the actual assignment to their work station.
  - ▶ *Technical Audit* of a course provides valuable data on the technical strengths and weaknesses existing in the course content and supporting technical documentation and equipment

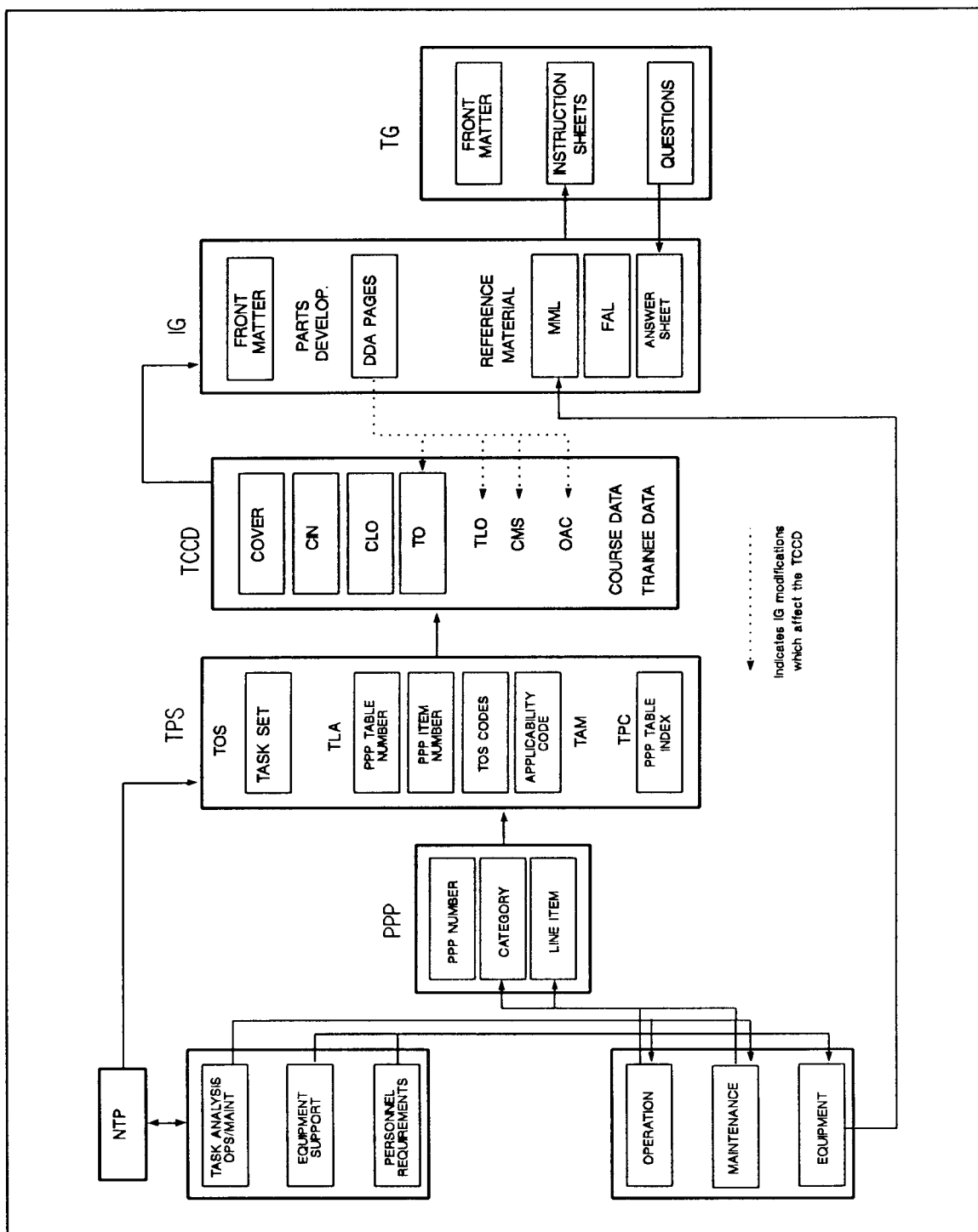
- ▶ *New instructors* reporting for duty from the fleet are an excellent source of information of what tasks are being performed on the job. New instructors should be considered as the equivalent of job incumbents, for purposes of providing external feedback, for up to six months after leaving the working environment.
  - ▶ *Contacts with Fleet personnel* in the area, Fleet personnel who are attending other courses at the training activity, or others who have knowledge of course graduate performance can provide valuable inputs, comments, and recommendations
  - ▶ Training activity liaison with the Fleet Operational Chain of Command is a useful source of training feedback
  - ▶ Training effectiveness as measured by direct fleet evaluation, testing, and assessment conducted by TSAs, is also a valid source of external feedback
- **Methods of Obtaining External Feedback.** The Navy-wide system for obtaining external feedback is governed by OPNAVINST 1500.71 and supported by OPNAVINST 1500.69.

## **TRAINING MATERIALS MODIFICATION (TMM)**

The rules governing TMM for interim change, technical change, change, and revision are found in this chapter and in CNETINST 1550.10. The process for creating new materials for inclusion in training materials are covered in Volume I of this manual. This section describes Change and Revision as applied to PPP/TPS based curriculum, and the effect a modification in one curriculum component can have on related components.

## **TMM ACTIONS**

- The interrelationship of PPP/TPS components is shown by the arrows in Figure 9-4.
  - ▶ The most frequent cause of Changes in curriculum materials occur in the IG, based on updates to technical documentation. For example, a modification to technical documentation will initiate a Change in the IG. This would also cause a Change in any Trainee Guide instruction sheets using the reference.
  - ▶ A modification to Technical Documentation could also result in a modification to the text of one or more PPP line items. This would initiate a PPP table Change, which would feed through to all components using the affected line item(s).
  - ▶ A Change made to the IG to resequence the DPs within a lesson topic would alter the sequence of instruction sheets used in the topic, causing a Change in the Trainee Guide. The TLOs may also be affected, depending on the scope of the modification. If TLOs are affected, the Curriculum Outline of Instruction in the TCCD must be updated to reflect the Change.
  - ▶ A Change is indicated on curriculum materials by a sequential number; Change 1.
  - ▶ A Revision to a course re-examines *all* course components, and is usually the result of an analysis of the job tasks associated with an equipment, subsystem, or system. Essentially, the rules for course development apply to a Revision and the course is put together in a new form using the existing CIN.



**FIGURE 9-4: INTERRELATIONSHIP OF PPP/TPS COMPONENTS**

- ▶ A Revision is indicated on curriculum materials by a letter; Revision A. A Revision incorporates previous Changes; the Change number is reset to "0" and starts over again.

## **PPP TABLES**

- The following will help you determine the difference between a Change and Revision to a PPP table

## **CHANGE**

- ▶ A PPP table Change is most commonly tied to a modification to technical documentation or a modification of equipment terminology

Applies to Approved tables only

Can only add line items or subitems at the end

Can delete line items (Shows up as "Deleted")

Cannot renumber existing line items

Can reword existing line items

Adding a Change does not cancel prior Change inputs; only increments the Change number

Submitted to custodian CCA listed in TRDB. Custodian CCA is responsible for forwarding approved Change to NETPMSA.

## REVISION

- ▶ PPP table Revisions are infrequent. PPP table Revisions generally indicate that the job tasks defined by the table have been analyzed and a restructuring of the table is necessary to reflect new developments.

Applies to Approved tables only

Can essentially rebuild a table, saving only the title and PTN

All prior Changes are incorporated into a Revision. Change number resets to "0".

(Delete)s are gone, line items are renumbered, and can be resequenced

Submitted to custodian CCA listed in TRDB. Custodian CCA responsible for forwarding approved Revision to NETPMSA.

## **TPS CHANGES/REVISIONS**

- The following will help you determine the difference between a Change and Revision to a TPS

## CHANGE

- ▶ Basically, any alteration to the TPS which does not fall under the conditions of a Revision (below) is a Change. For example, a Change in a PPP table results in some added and deleted line items. This will be reflected in the TLA for the Changed PPP table, and carried forward into the TLO for any line items used in a course.

Applies to Approved TPS only

In response to PPP table Change, can only add line items or subitems at the end

In response to PPP table Change, can delete line items (Shows up as "Deleted")

Cannot renumber existing line items

Adding a Change does not cancel prior Change inputs; only increments the Change number

Submitted to custodian CCA listed in TRDB. Custodian CCA responsible for forwarding approved Change to NETPMSA.

### **REVISION**

- ▶ A TPS Revision can be introduced at the TPS directly (for example, by a modification of a Navy Training Plan) or come from a Revision to one or more PPP tables. If the TPS supports more than one course, the impact of the TPS Revision must be coordinated by the CCA with other users.

Applies to Approved TPS only

Can essentially restructure a TPS, saving only the title and TPS number

All prior Changes are incorporated into a Revision. Change number resets to "0"

(Delete)s are gone, TLA line items are renumbered

Submitted to custodian CCA listed in TRDB. Custodian CCA responsible for forwarding approved Revision to NETPMSA.

## INSTRUCTOR GUIDE/TRAINEE GUIDE

- In terms of frequency of occurrence, Changes to the IG and TG are by far the most common. This is related to the updating of technical documentmtation, and constant improvements in support materials such as adding, deleting, or changing transparencies, inclusion of new cites in the IG RIA column, updating the FAL, etc. Most modifications to the IG/TG have no outside effects. However, it is within the realm of Change that the subjects within the course can be resequenced, or times reallocated. Resequencing subjects or reallocating times will require a Change in the TCCD Course Outline of Instruction and Course Master Schedule. The TCCD is a management document and must accurately reflect the course as taught.

### CHANGE

Can only Change an approved IG/TG

Cannot make any modifications which will affect the CLOs

Can modify the Hazard Awareness Notice. This will carry through to the TG.

Can add, delete, combine, reword DPs as long as TLOs for a topic are accomplished

Can add, delete, reword, update cites in the RIA column. Any cites involving instruction sheets must be followed up with a Change to affected instruction sheet(s) in the TG.

**NOTE:** The Trainee Guide as a bound volume is **not** given Change numbers or Revision letters. Only the instruction sheets show Change and Revision.

Can resequence the order of presentation

Can reallocate times between class and labs. Cannot increase or decrease total course time.



**REVISION**

- ▶ Only an approved course can be opened for Revision
- ▶ A Revision requires an approved TPP. When a course is revised there is likely to be major modifications to the IG/TG. Essentially, all elements of the IG/TG can be modified under the existing CIN.
- ▶ Prior Changes are incorporated into a Revision. The Change number resets to "0".

**TCCD**

- ▶ The Letter of Promulgation, placed in the TCCD, is issued for new development and Revisions. A Change does not require a Letter of Promulgation; the Change number will be indicated only on the affected curriculum materials.
- ▶ As a management document, the TCCD must reflect the current status of the course. This includes the:

Course Outline of Instruction

Course Master Schedule

Course Data

Student Data

## SUMMARY

Evaluation, surveillance, and training materials modification are performed for the life cycle of all courses. Every TF is responsible for monitoring each course it teaches and proposing modifications to the CCMM as needed. This chapter and NAVEDTRA 135 describe the responsibilities of TFs and CCMMs for these functions.

NAVEDTRA 131 - VOLUME III  
KEY WORD LIST

Activity Group/Subactivity Group (AG/SAG)	2-16
Assignment Sheets	7-A-4
Audit	1-4, 1-9, 1-10, 1-15, 5-4, 9-10
Background	3-1
Catalog of Navy Training Courses (CANTRAC)	1-9, 2-2, 8-4
Categories of Resources	2-5
CCMM	1-9, 1-10, 3-4, 3-5, 4-4, 4-5, 5-4, 6-1, 6-2, 6-5, 6-7, 6-9, 7-3, 7-7, 7-10, 7-14, 8-4, 8-5, 9-1, 9-2, 9-3, 9-5, 9-6, 9-7, 9-8, 9-19
Change	1-2, 1-6, 1-10, 2-7, 2-12, 3-2, 3-5, 4-5, 5-4, 7-9, 7-10, 7-20, 9-3, 9-4, 9-5, 9-6, 9-7, 9-8, 9-11, 9-12, 9-14, 9-15, 9-16, 9-17, 9-18
CIN	1-9, 2-2, 2-9, 2-11, 7-17, 7-B-3, 9-12, 9-18
Consolidated Shore Base Allowance List (COSBAL)	7-5
Course Data Pages	2-11
Course Data Processing Code (CDP)	2-2, 2-11
Course Learning Objectives	6-4, 6-6, 7-10, 9-2, 9-3, 9-5, 9-6, 9-7
Course Mission Statement	2-12, 4-4, 7-19, 7-20
Course Monitoring Outline Sheet	7-11, 7-A-1, 7-A-3
Course Monitoring Time Log	7-11, 7-B-1, 7-B-3
Course Reviews	2-3, 2-4
Curriculum and Instructional Standards Office (CISO)	6-2, 7-6
Curriculum Control Authority (CCA)	1-4, 1-9, 3-2, 4-2, 5-4, 6-1, 7-1, 9-3
Curriculum Outline of Instruction	5-2, 5-3, 9-12
Design Phase	2-11
Diagram Sheets	7-A-4
External Feedback	2-4, 2-11, 9-10, 9-11
Fault Insertion Guide	1-6
Final Course Monitoring Report	7-7, 7-11, 7-16
Fleet Training Assessment Program (FLETAP)	2-4
Frequency of performance	2-4
Impact Statements	2-4
Information Sheets	7-A-4
Instructional Media Materials (IMM)	1-5
Instructor Utilization Handbook	1-6

NAVEDTRA 131 - VOLUME III  
KEY WORD LIST - Continued

Interactive Courseware (ICW)	2-19
Interim Change	1-6, 9-3, 9-4, 9-5, 9-8, 9-11
Job Sheets	6-6, 7-A-4
Job Task	3-3
Lesson Plan	1-5, 5-2, 6-2, 6-5, 6-6, 7-9, 7-14, 7-15, 7-18, 7-A-3, 8-3, 8-4, 9-4, 9-6
Lesson Topics	1-5, 1-6, 5-2, 6-4, 6-6, 7-3, 7-20
Letter of Promulgation	1-2, 1-3, 5-3, 5-4, 8-1, 8-2, 8-3, 9-18
Logistic Support Analysis Record (LSAR)	1-11
Maintenance Trainers	2-17, 2-18
Management Materials	1-2, 1-4, 6-4, 6-8, 7-9
MIL-STD-1379D	1-4, 1-11
Milestones	2-4, 2-5, 2-15, 3-2, 4-3, 6-3, 6-4, 6-5
Military Construction (MILCON)	2-6, 2-21
National Stock Number (NSN)	2-16
Navy Enlisted Classification (NEC)	2-13, 5-3
Navy Occupational Task Analysis Program (NOTAP)	2-4
Navy Officer Billet Code	2-13, 5-3
New Course Development	2-1, 2-2, 2-4, 2-9, 3-5, 4-5
NITRAS	1-13, 2-2, 2-7, 2-11, 8-4
Operations and Maintenance (O&MN)	2-16
Performance Tests	6-6, 7-A-10
Personnel Performance Profile Based Curriculum Development Manual	2-7, 2-15
Pilot Course	1-1, 1-2, 1-3, 1-4, 5-4, 7-1, 7-2, 7-3, 7-5, 7-6, 7-7, 7-8, 7-9, 7-10, 7-11, 7-12, 7-13, 7-14, 7-16, 7-17, 7-18, 7-19, 7-21, 8-1
Pilot Course Monitoring Report	1-1, 1-3, 1-4, 7-12, 7-20
Planned Average on Board (AOB)	2-14
PPP Table Index	4-2, 4-3
Pre-Mishap Plan	9-9
Problem Sheets	7-A-4
Related Instructor Activity	7-A-3
Resource Requirements List (RRL)	2-7, 5-2, 9-9

NAVEDTRA 131 - VOLUME III  
KEY WORD LIST - Continued

Revision	1-2, 1-6, 1-10, 1-15, 2-1, 2-2, 2-4, 2-5, 2-7, 2-9, 2-10, 2-11, 2-12, 2-15, 2-20, 3-2, 3-5, 4-5, 5-4, 8-3, 9-7, 9-8, 9-11, 9-12, 9-14, 9-15, 9-16, 9-17, 9-18
Rolling Pilot	7-2
Sections	5-2, 6-6, 7-2, 7-16, 7-18, 7-19
Sequencing	7-18
Special Purpose Electronic Test Equipment (SPETE)	2-17
Subsystem	1-7, 2-17, 3-1, 9-12
Support materials	1-3, 1-4, 1-5, 1-15, 6-1, 6-5, 6-7, 6-9, 7-2, 7-9, 7-11, 7-18, 7-A-4, 8-1, 8-4, 9-17
Surveillance	1-1, 1-2, 1-6, 1-8, 2-4, 3-5, 4-5, 5-4, 7-6, 9-1, 9-2, 9-19
System	1-3, 1-4, 1-7, 1-11, 1-13, 2-2, 2-4, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-15, 2-17, 3-1, 3-3, 4-1, 6-4, 6-7, 8-4, 9-11, 9-12
Table Assignment Matrix (TAM)	4-1
Task Based Curriculum Development	1-12, 2-8, 2-15
Task Performance	1-2
Task/Function	3-1
Team Training Curriculum Development	1-12, 2-8
Technical Change	1-6, 3-5, 4-5, 9-6, 9-7, 9-8, 9-11
Technical Training Equipment (TTE)	1-14, 2-17, 9-9
Testing Plan	1-4, 6-2
TPS Repository (TPS REP)	4-2
Trainee Data	5-3
Training Agency (TA)	1-7, 3-2, 4-2
Training Appraisal	2-4
Training Course Control Document (TCCD)	1-3, 1-4, 3-3, 5-1, 6-2
Training Facility (TF)	1-9, 6-1, 7-2
Training Facility Administrative Review	7-12, 7-C-1
Training Materials Modification (TMM)	9-11
Training Objective Statements (TOS)	4-1
Training Path System (TPS)	1-3, 1-4, 2-11, 3-3, 4-1, 6-4
Training Project Plan (TPP)	1-3, 1-4, 2-1, 2-4, 6-3, 9-3

NAVEDTRA 131 - VOLUME III  
KEY WORD LIST - Continued

Training Requirements Data Base Annual Report .....	1-15
Training Support Agency .....	1-7, 3-2, 4-2, 7-10, 9-2
Training Time Out (TTO) .....	9-9
Visual Information (VI) .....	2-18, 2-20
Visual Information (VI) Devices .....	2-18